

KIC 010091792

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
010091792-01	OBS	No	0.615403	131.760962	59.7	2.080	11.1	12.5	1.57	7209	1.41	22442.92
010091792-02	OBS	No	0.615400	132.076789	57.0	2.067	9.6	11.5	1.57	7209	1.37	22443.02
010091792-03	OBS	No	27.288357	142.021630	1269.0	0.528	9.3	9.3	1.57	7209	6.03	143.00
010091792-04	OBS	No	28.898581	152.405754	810.1	3.332	7.9	6.9	1.57	7209	4.54	132.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010091792-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
010091792-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
010091792-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV
010091792-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_TER_ALT—MOD_POS_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

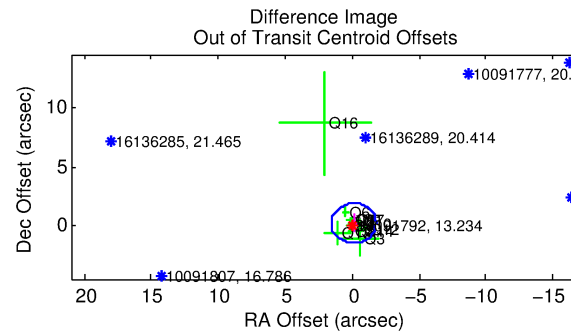
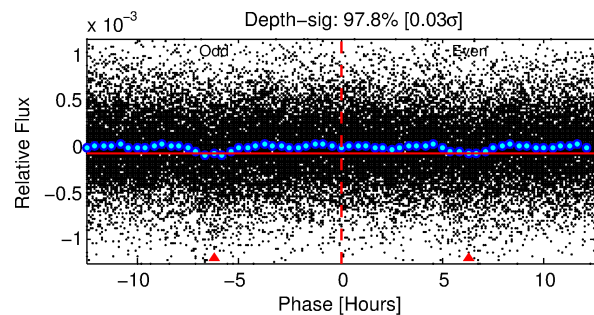
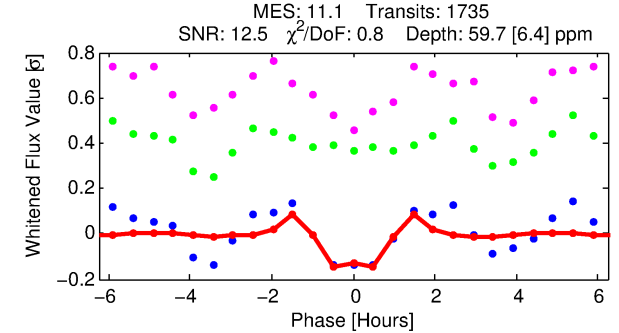
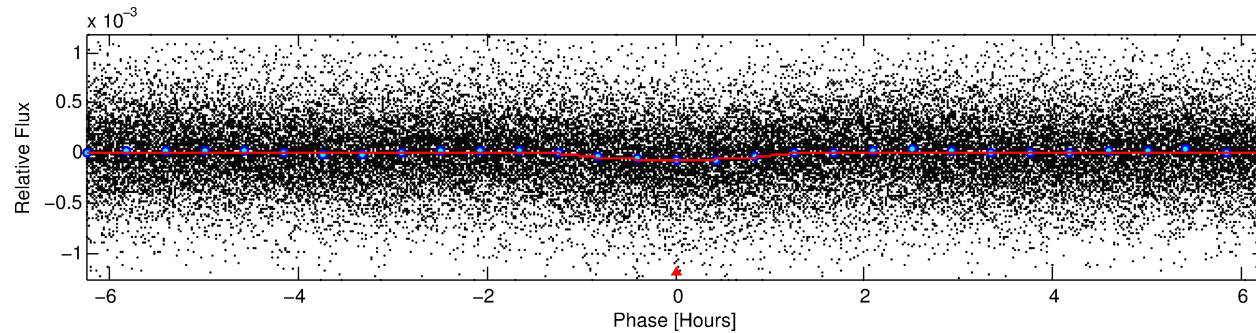
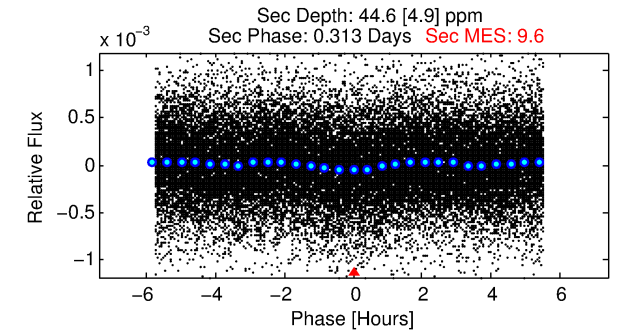
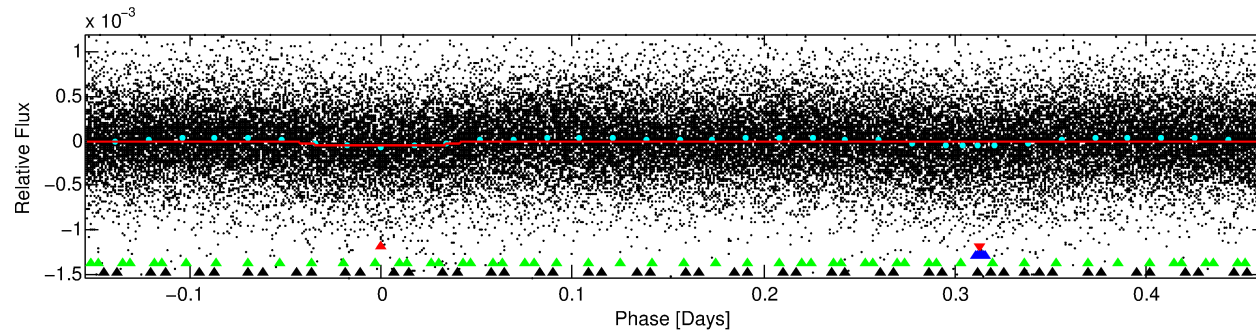
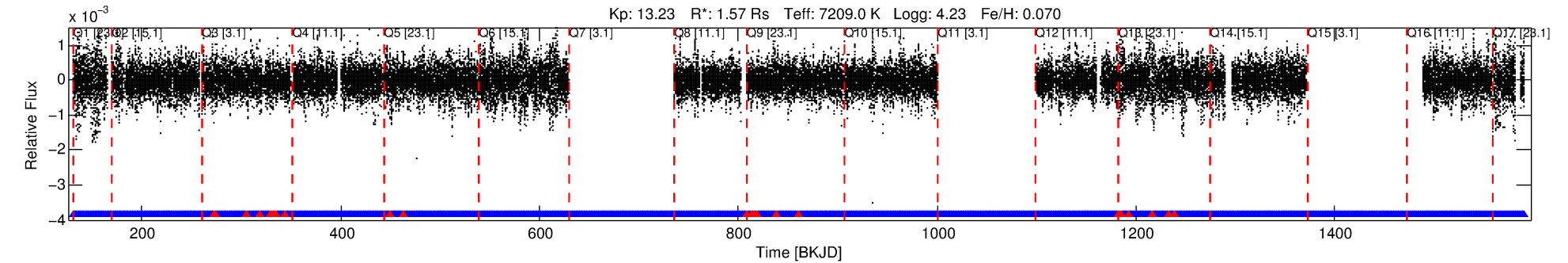
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010091792-01

No Significant Match Found

DV One-Page Summary

KIC: 10091792 Candidate: 1 of 4 Period: 0.615 d



DV Fit Results:

Period = 0.61540 [0.00001] d
Epoch = 131.7610 [0.0012] BKJD
Rp/R* = 0.0082 [0.0016]
a/R* = 1.39 [0.78]
b = 0.90 [0.25]
Seff = 22442.92 [10310.13]
Teff = 3121 [358] K
Rp = 1.41 [0.57] Re
a = 0.0163 [0.0048] AU
Ag = 3.29 [1.88] [1.21σ]
Teffp = 6497 [730] K [4.15σ]

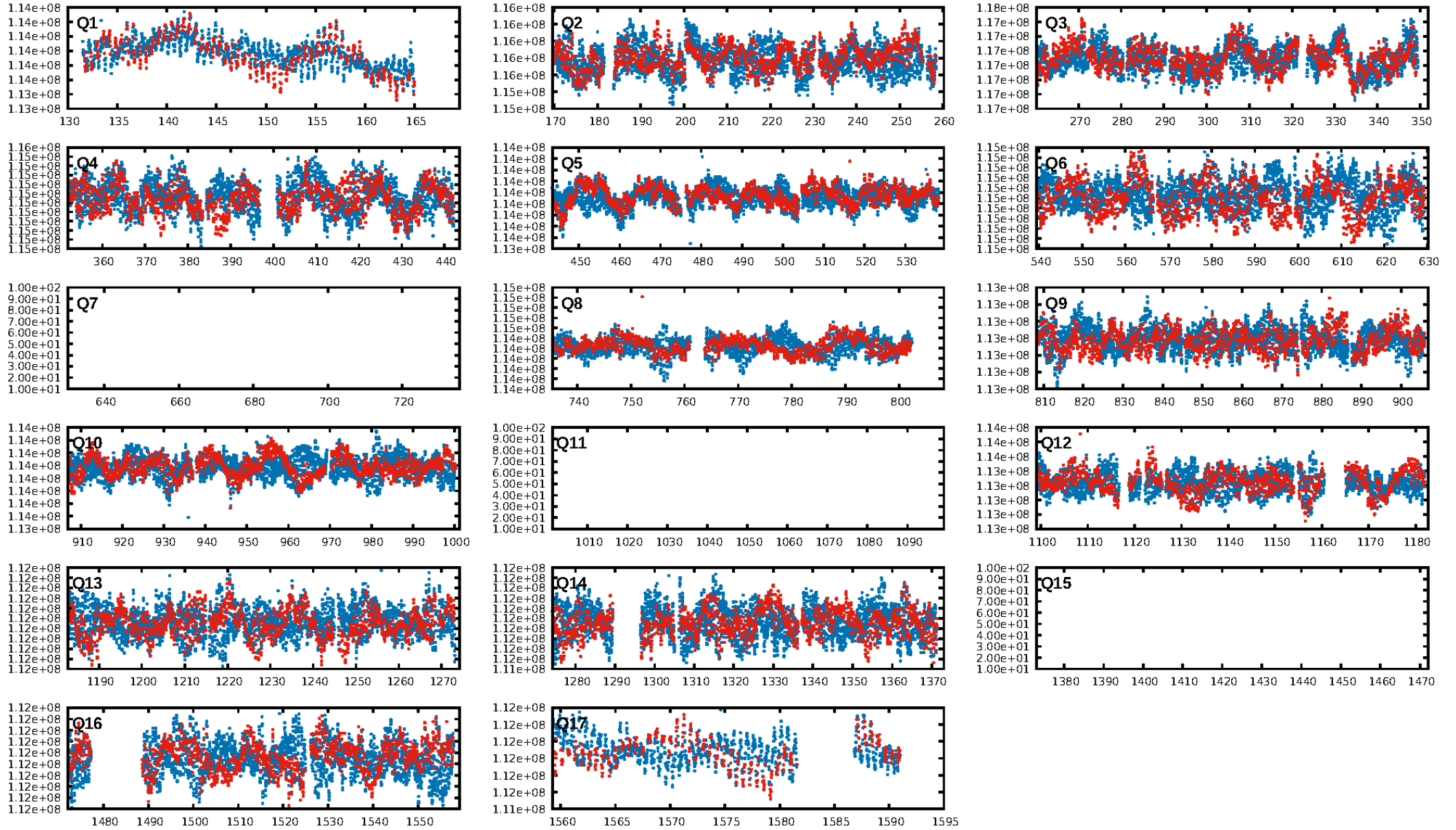
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [298.36σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.08e-17
RollingBand-fgt: 0.98 [1611/1637]
GhostDiagnostic-chr: -11.52
Centroid-sig: 38.0%
Centroid-so: 0.416 arcsec [0.93σ]
OotOffset-rm: 0.234 arcsec [0.42σ]
KicOffset-rm: 0.203 arcsec [0.68σ]
OotOffset-st: 4/1/3/5 [13]
KicOffset-st: 4/1/3/5 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [14/14]

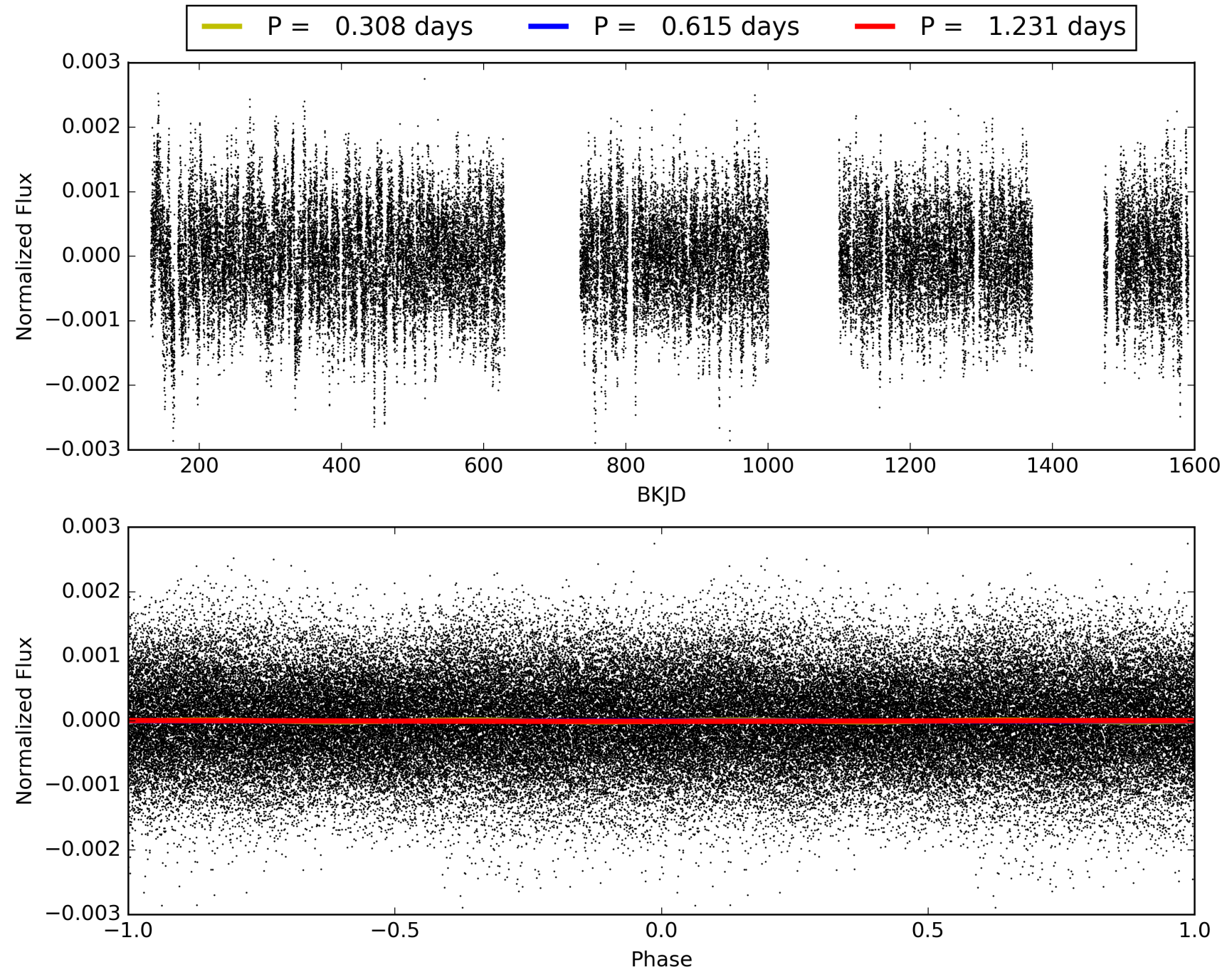
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 08:52:30 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010091792-01, PDC Light Curves

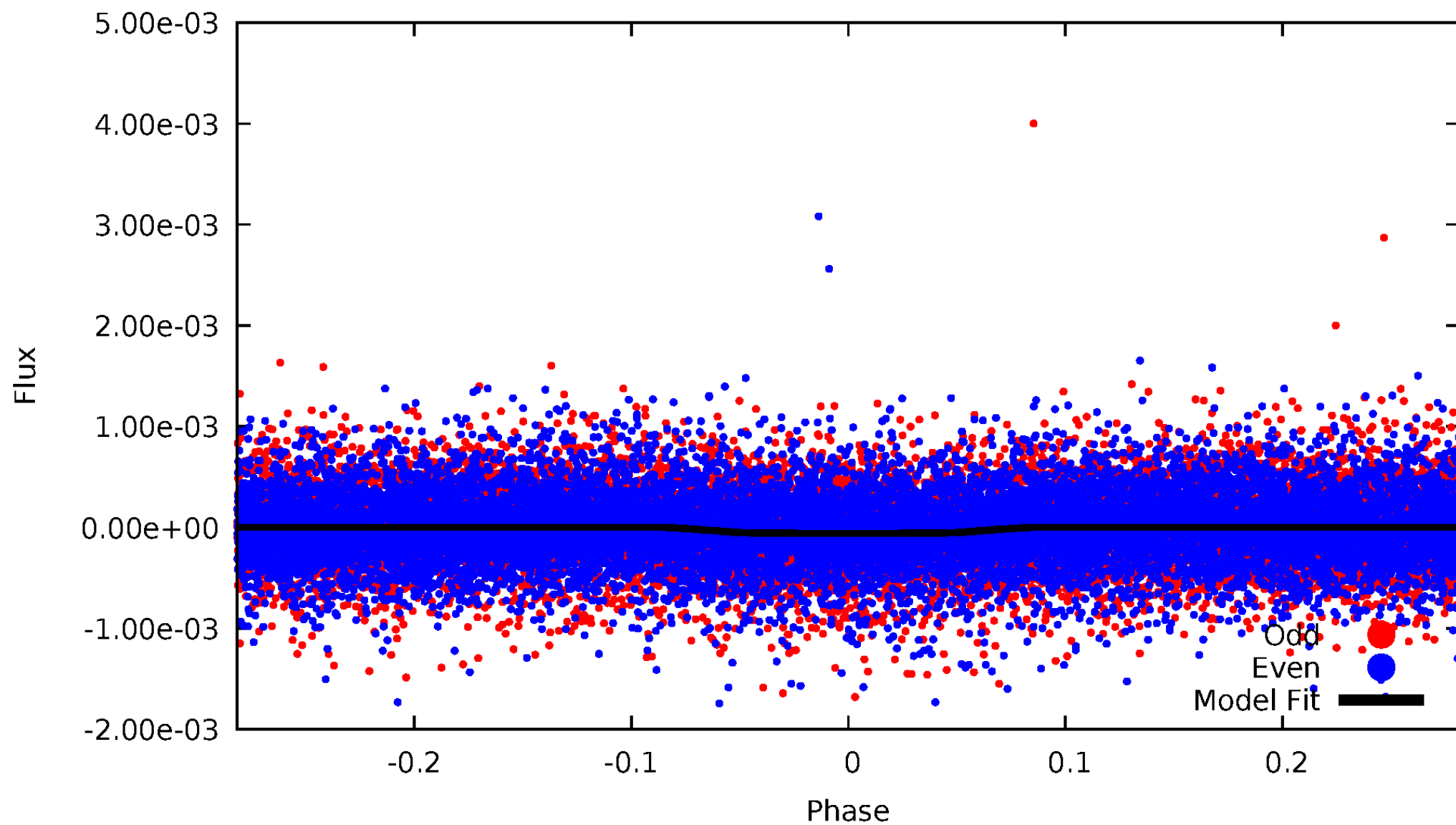


TCE 010091792-01



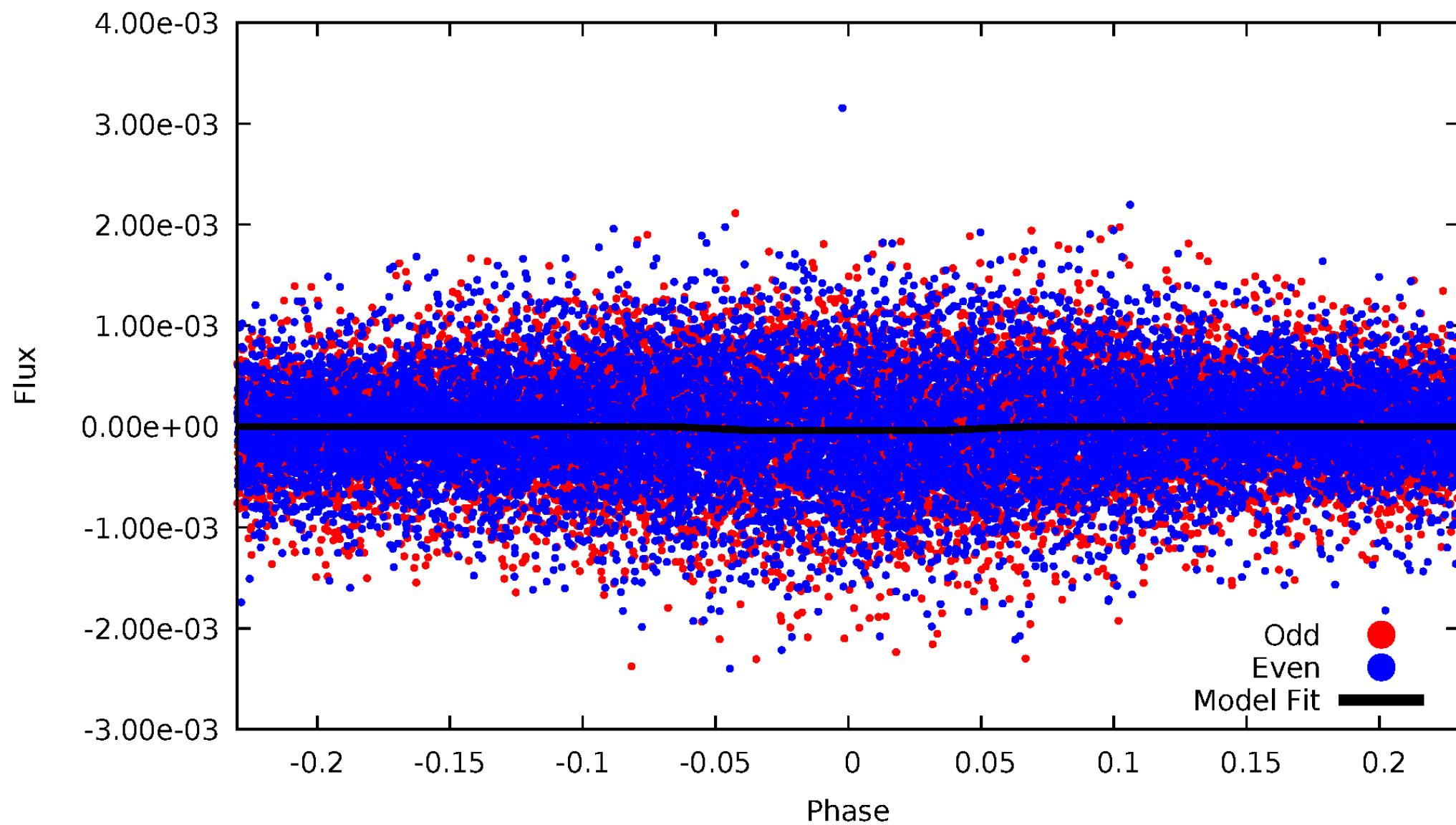
DV Odd/Even

TCE 010091792-01

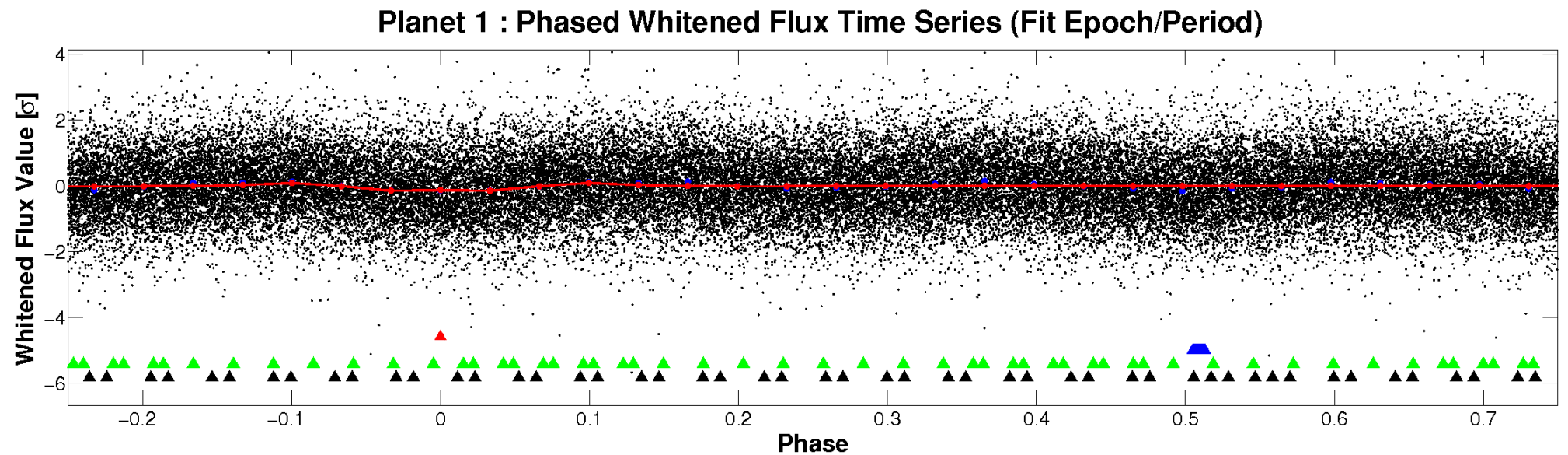
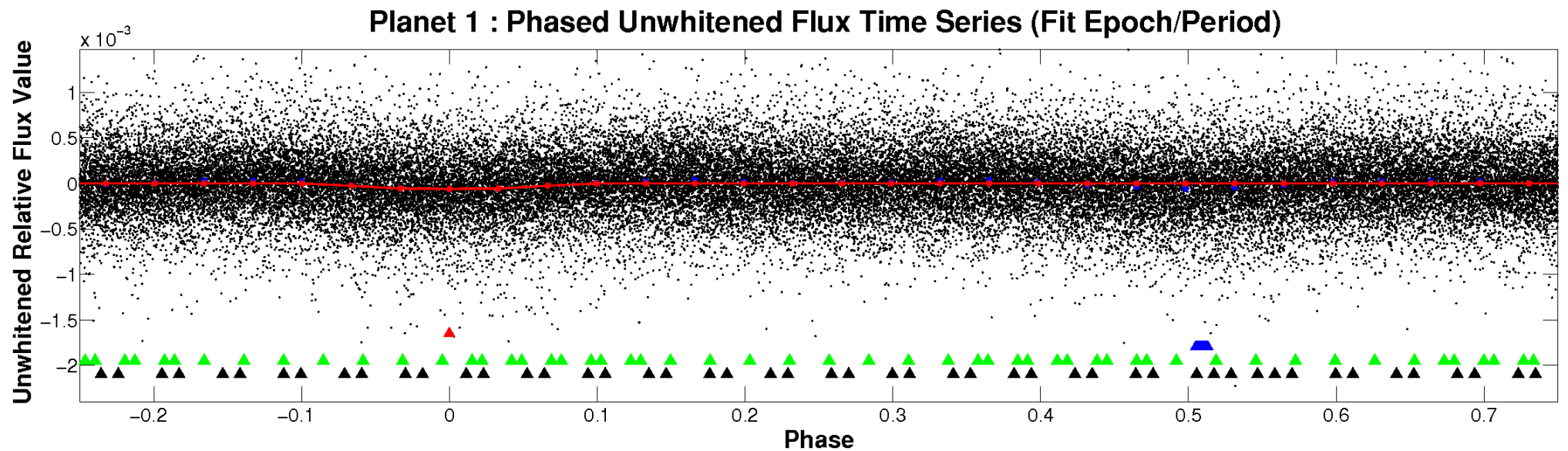


ALT Odd/Even

TCE 010091792-01

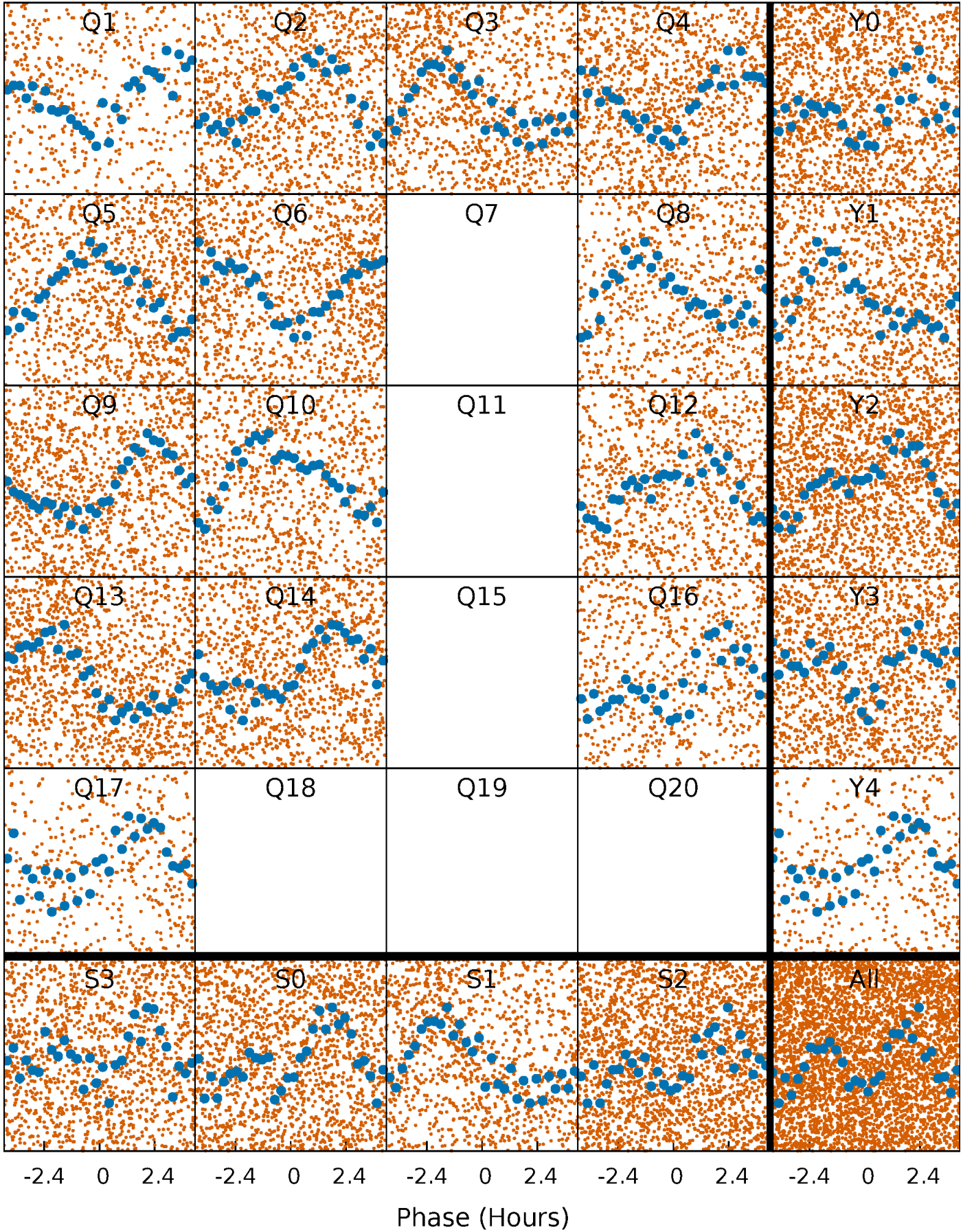


Non-Whitened Vs. Whitened Light Curve



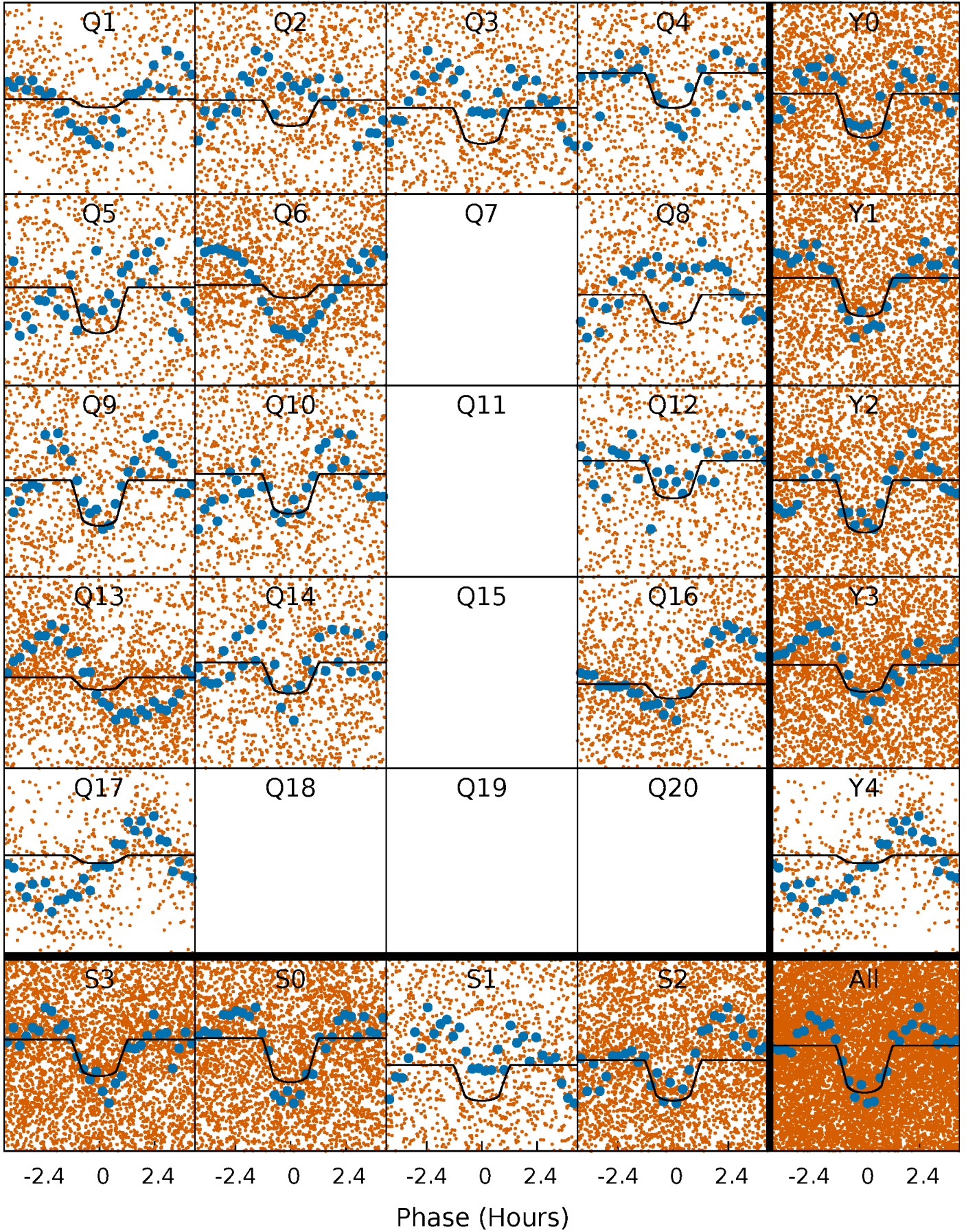
PDC Quarter-Phased Transit Curves

TCE 010091792-01 P= 0.615403 Days $T_0=131.760962$ (BKJD)



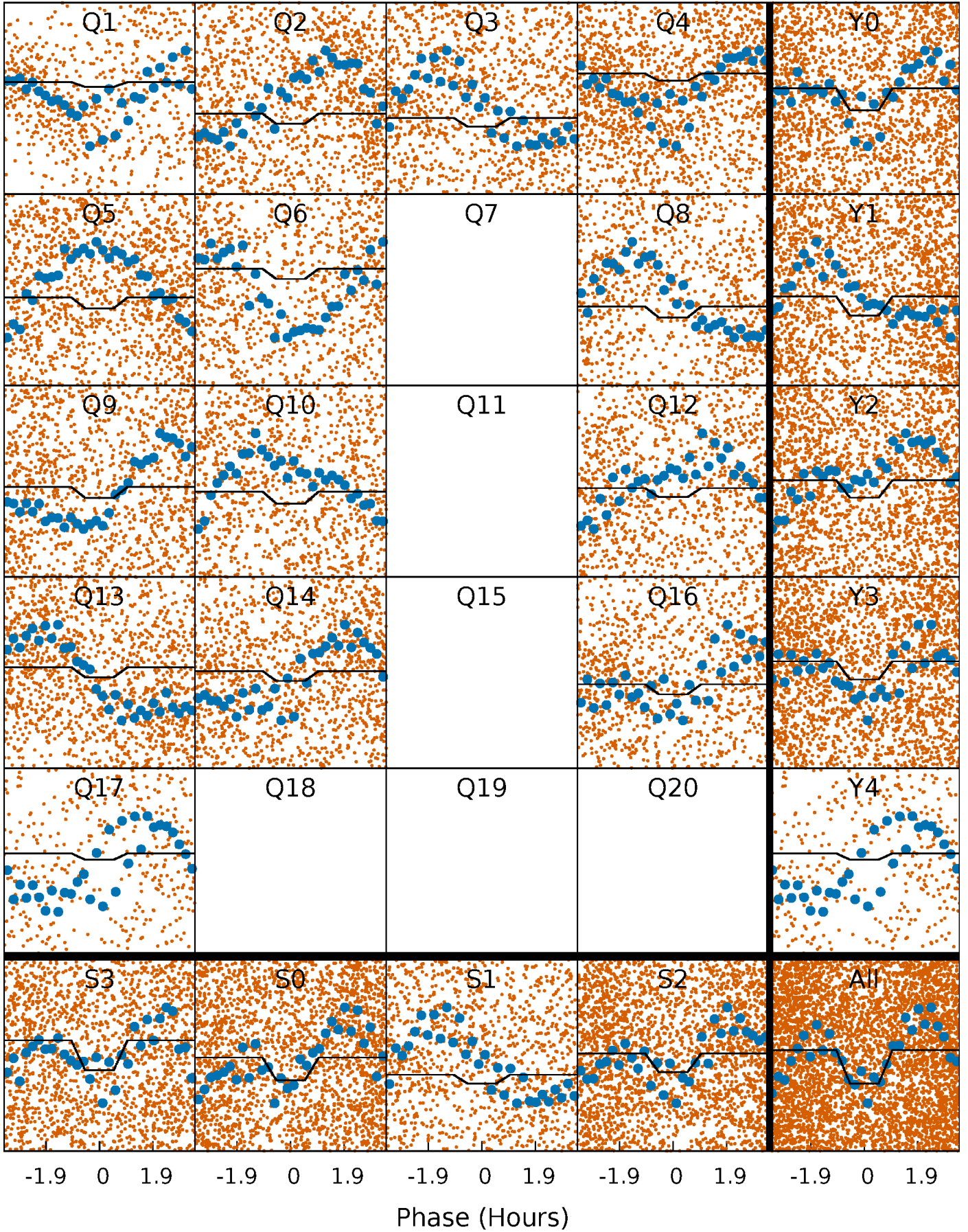
DV Quarter-Phased Transit Curves

TCE 010091792-01 P= 0.615403 Days $T_0=131.760962$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

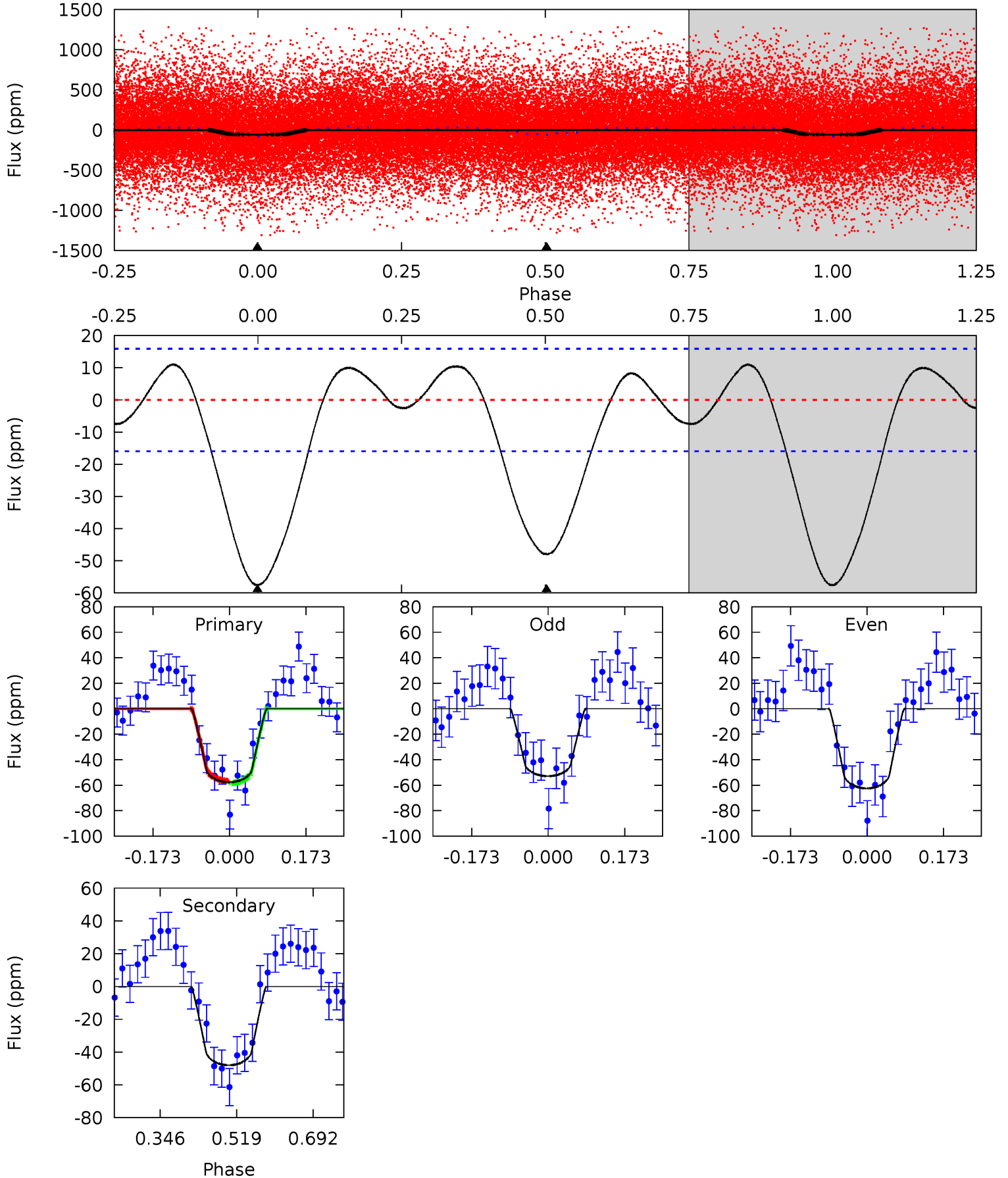
TCE 010091792-01 P= 0.615404 Days $T_0=131.754140$ (BKJD)



DV Model-Shift Uniqueness Test

010091792-01, P = 0.615403 Days, E = 131.145559 Days

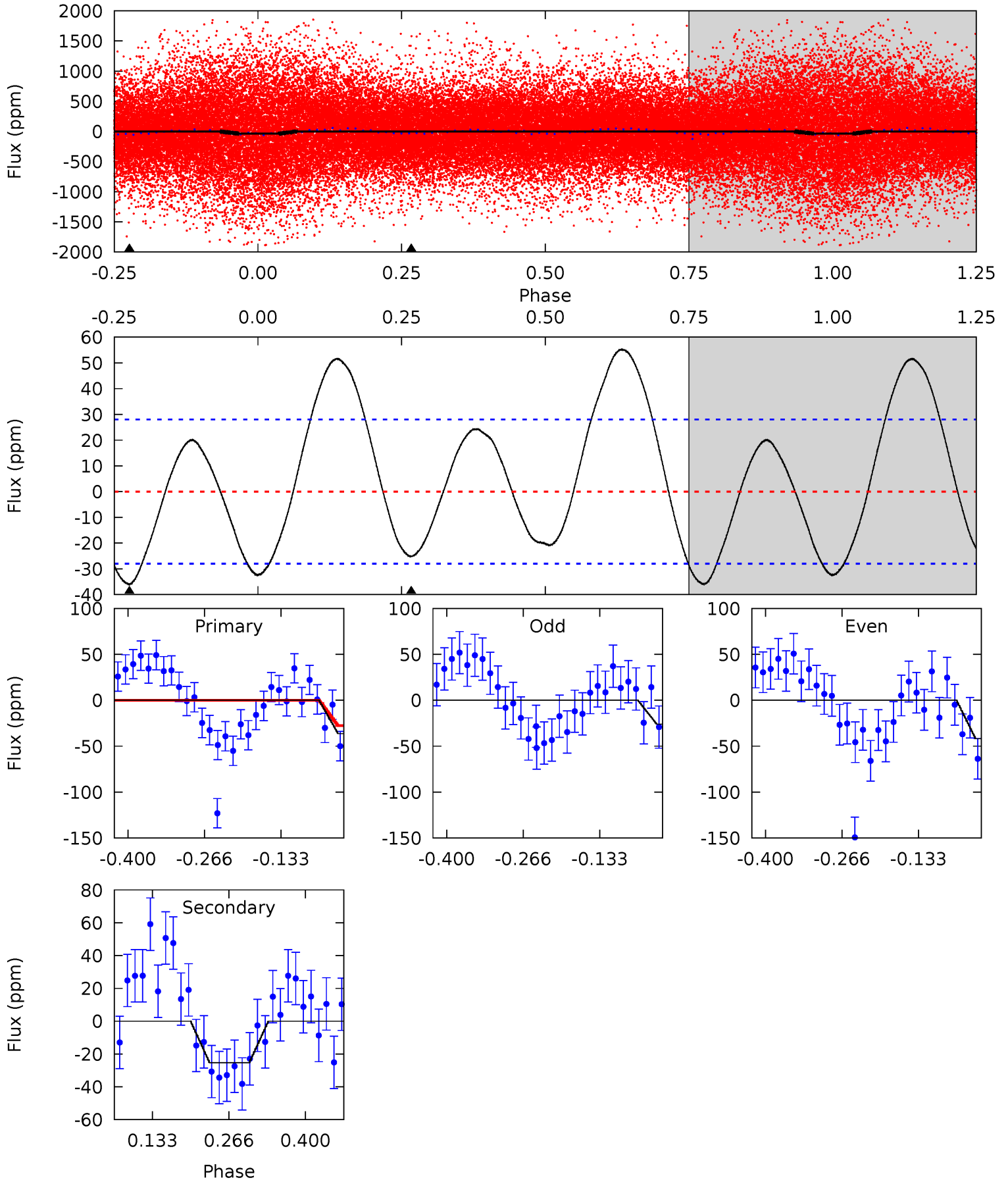
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.1	13.4	0	0	4.45	1.36	1.36	16.1	16.1	13.4	13.4	1.35	1.00	0.16	0.26



Alt Model-Shift Uniqueness Test

010091792-01, P = 0.615404 Days, E = 131.138736 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.85	4.07	0	0	4.50	1.50	4.21	5.85	5.85	4.07	4.07	1.38	1.21	0.60	1.01



Stellar Parameters For KIC 010091792

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7209^{+228}_{-371}	$4.229^{+0.072}_{-0.217}$	$0.070^{+0.200}_{-0.350}$	$1.568^{+0.565}_{-0.242}$	$1.517^{+0.233}_{-0.211}$	$0.555^{+0.234}_{-0.314}$
	+3%/-5%	+2%/-5%	+286%/-500%	+36%/-15%	+15%/-14%	+42%/-57%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010091792-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-48 ± 4	$1.45^{+0.38}_{-0.33}$	4407^{+359}_{-295}	6340^{+920}_{-674}	$3.216^{+2.018}_{-1.154}$
Alt.	-25 ± 6	$1.17^{+0.35}_{-0.30}$	4461^{+351}_{-304}	6021^{+1148}_{-860}	$2.586^{+2.233}_{-1.142}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

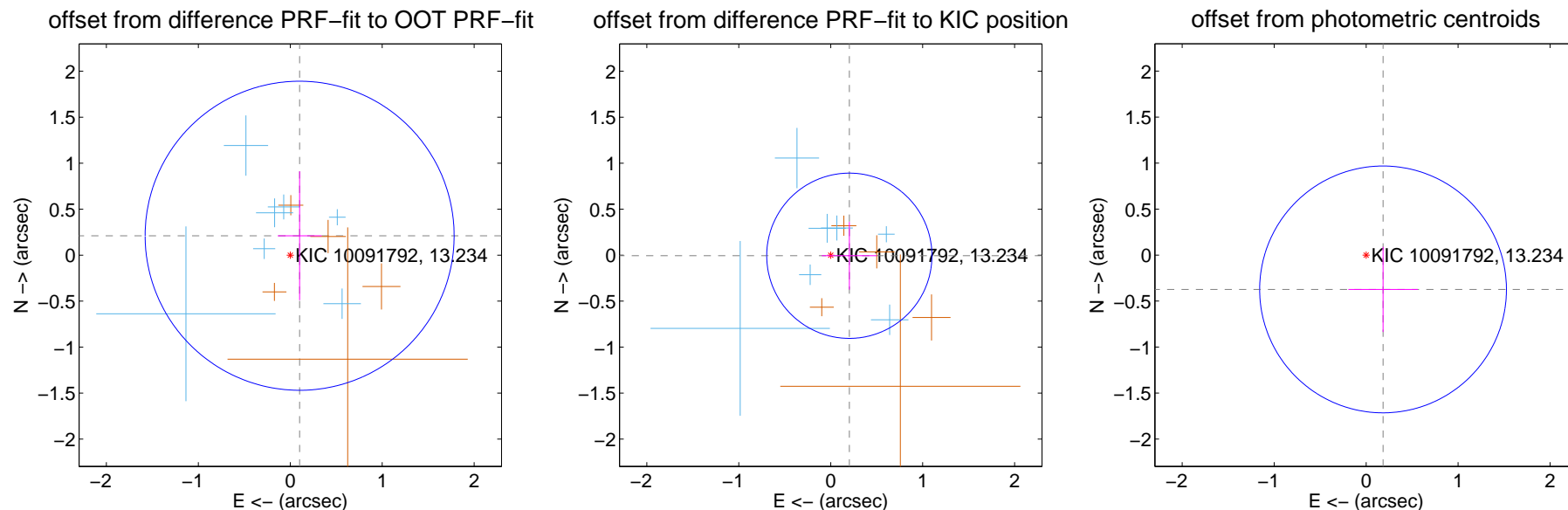
DV Centroid Data

Supplemental centroid analysis for 010091792-01. Kepler magnitude: 13.23. Transit SNR 12.45

There are 7 quarters with good PRF difference image offsets

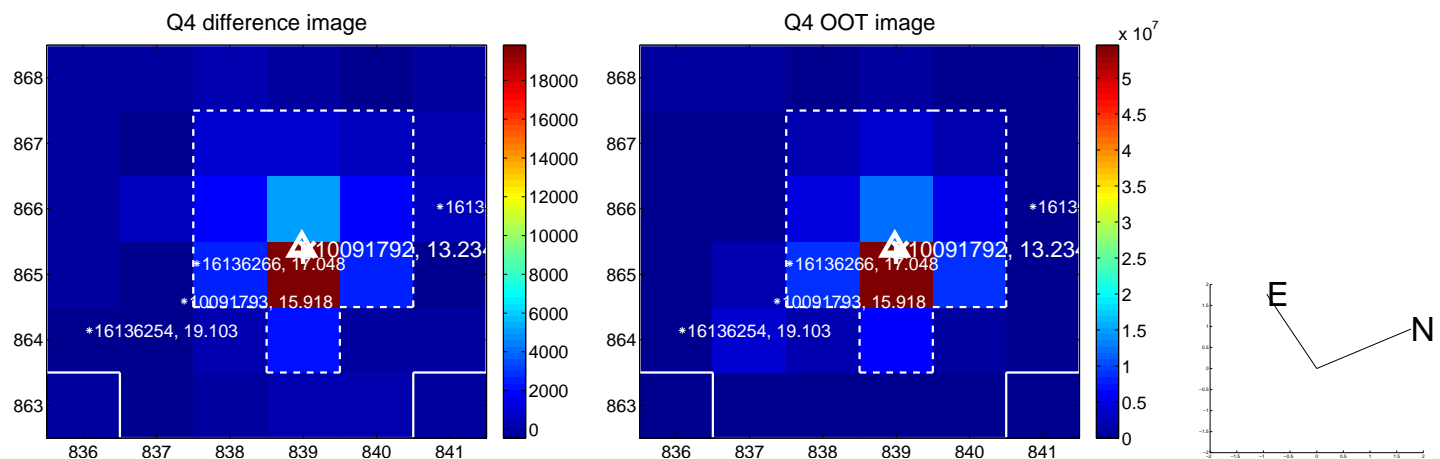
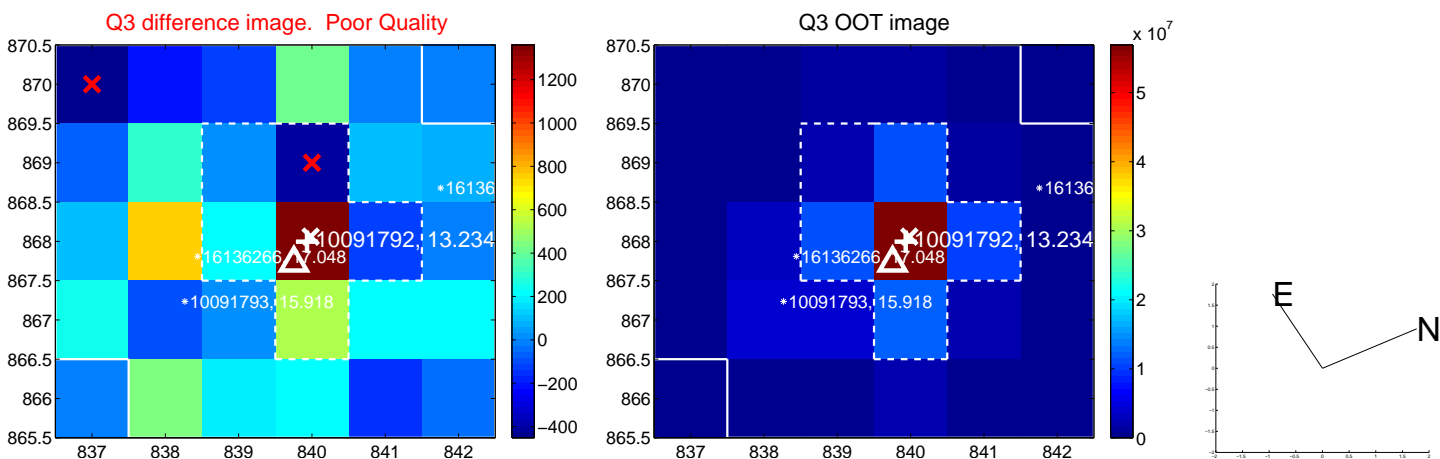
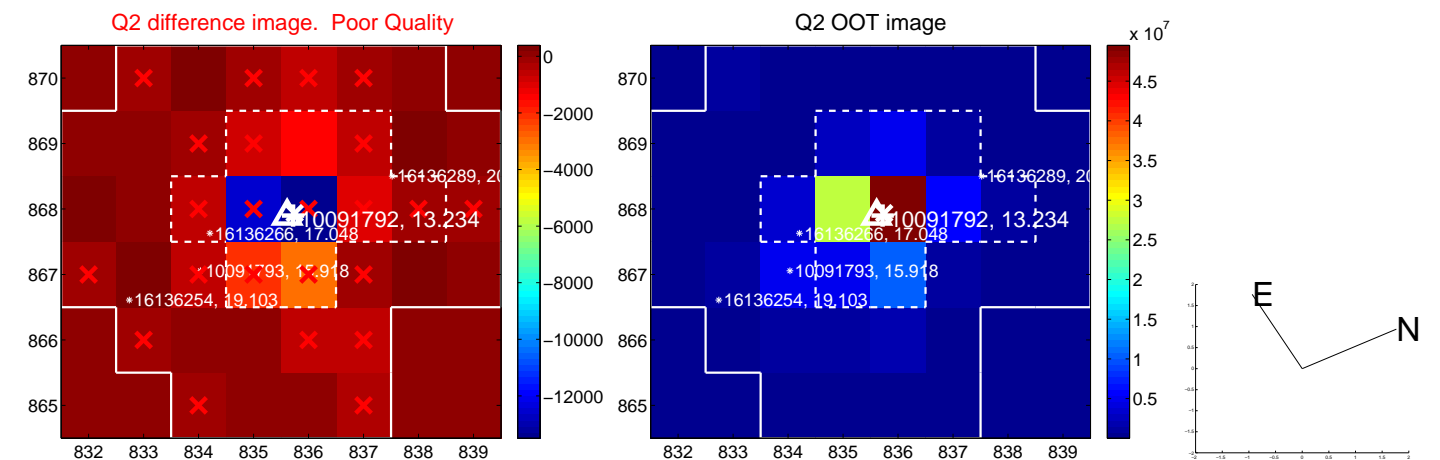
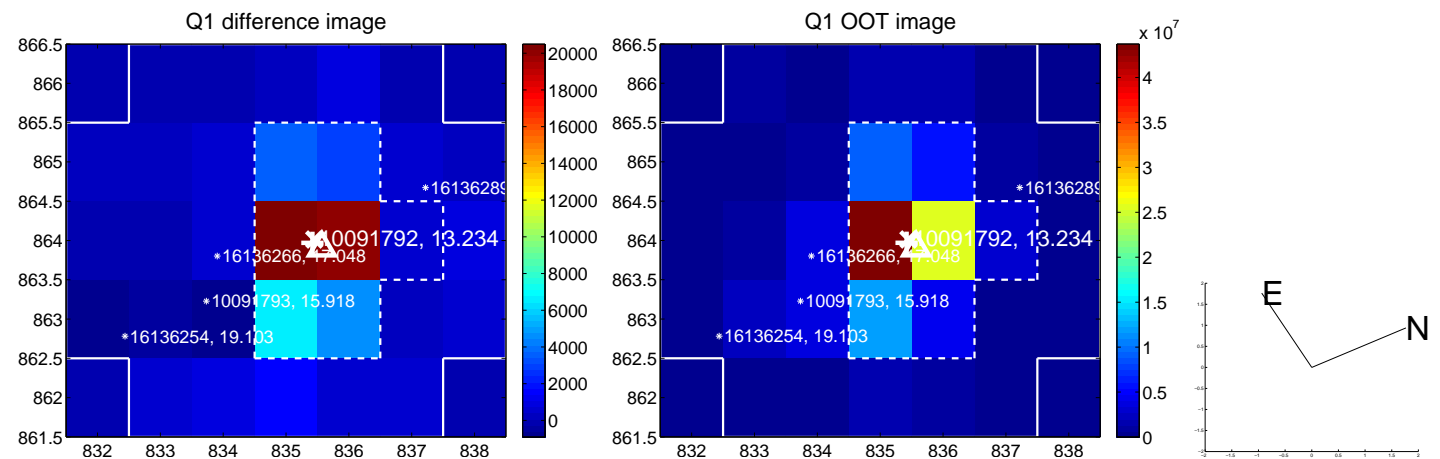
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.234 ± 0.560	0.42	-0.102 ± 0.239	0.211 ± 0.701
PRF-fit source offset from KIC position	0.203 ± 0.300	0.68	-0.202 ± 0.299	-0.007 ± 0.368
photometric centroid source offset	0.42 ± 0.45	0.93	-0.18 ± 0.38	-0.37 ± 0.46

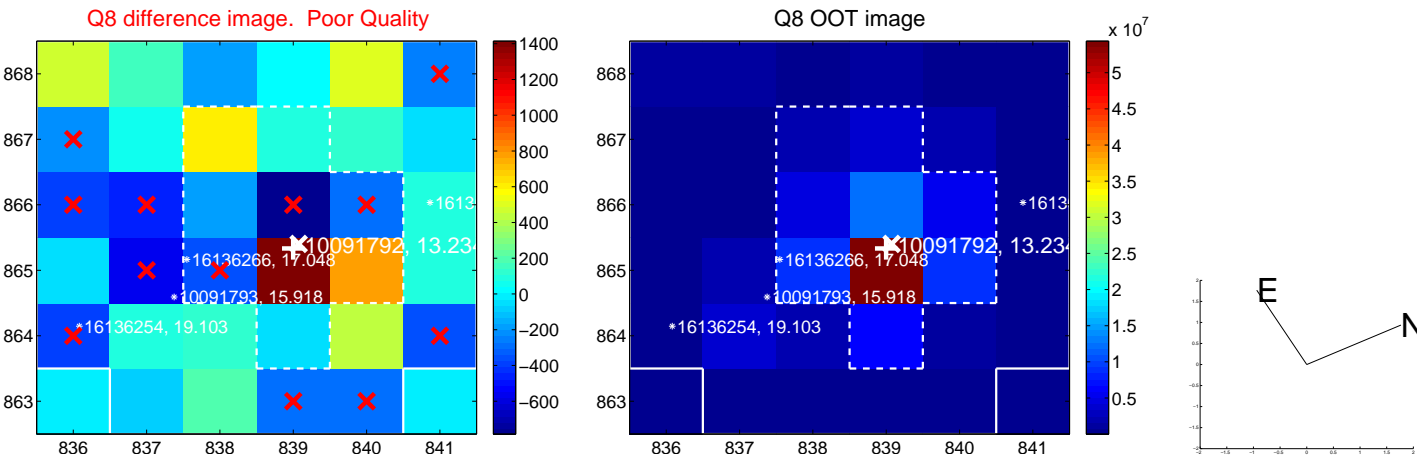
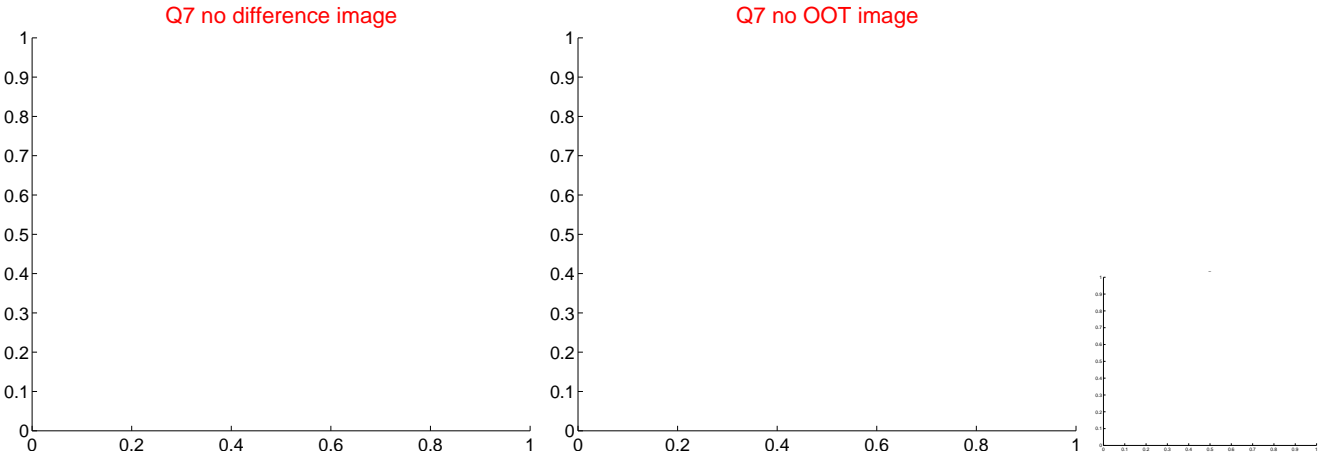
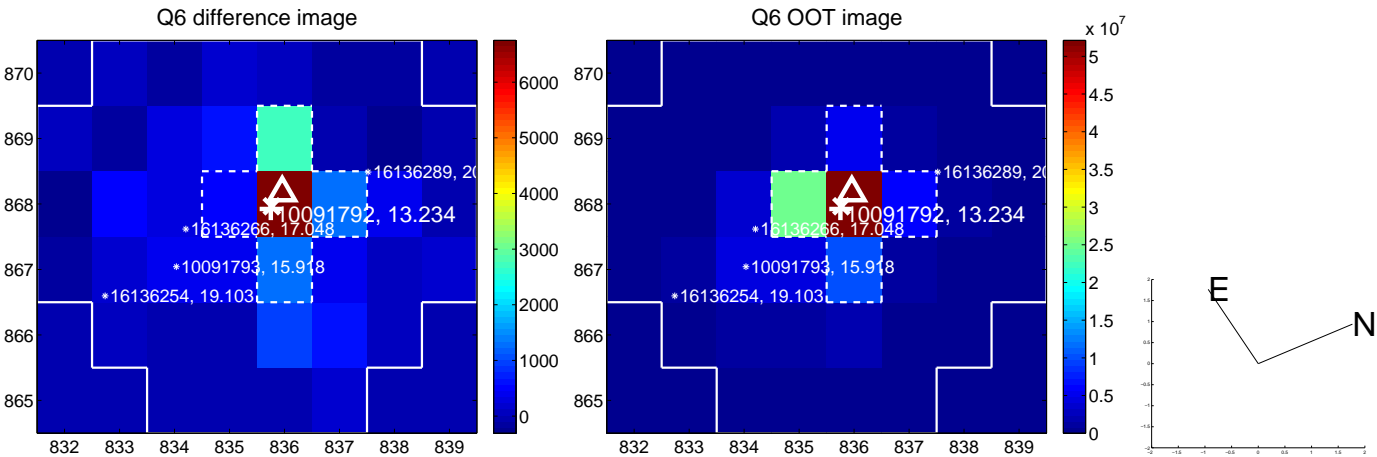
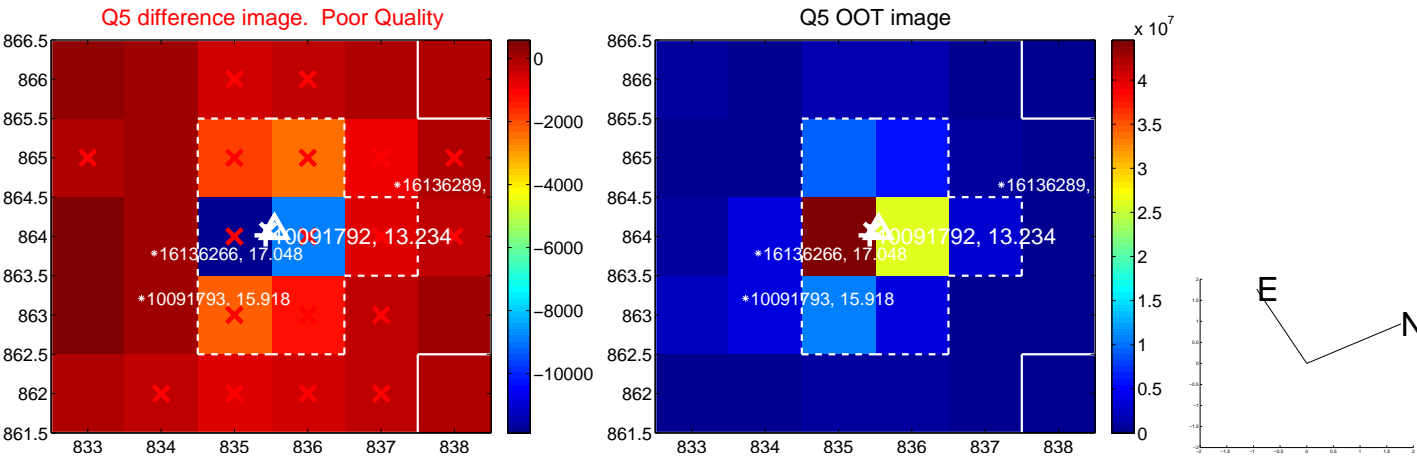


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

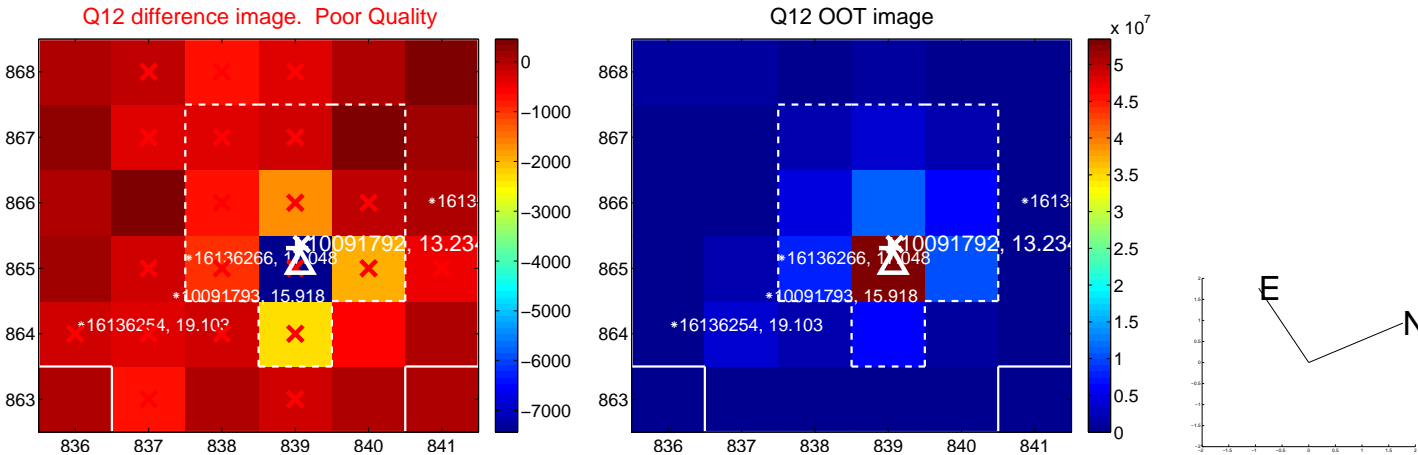
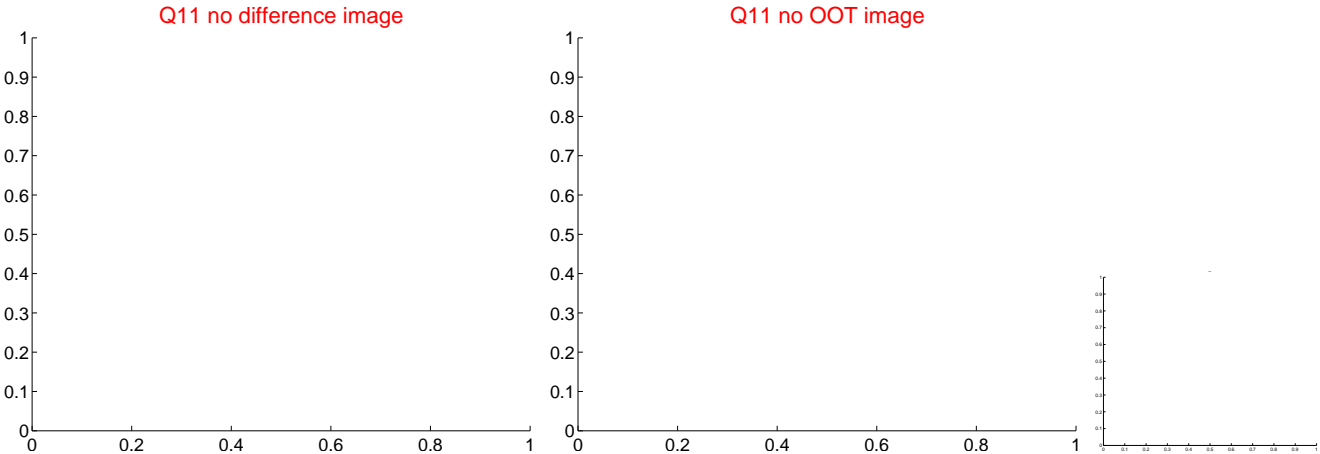
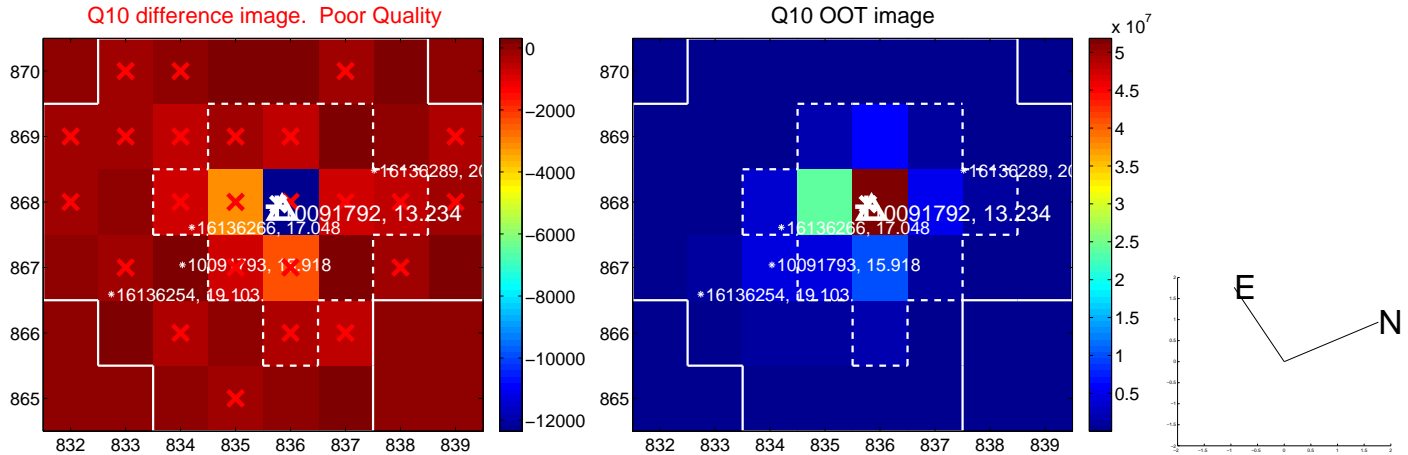
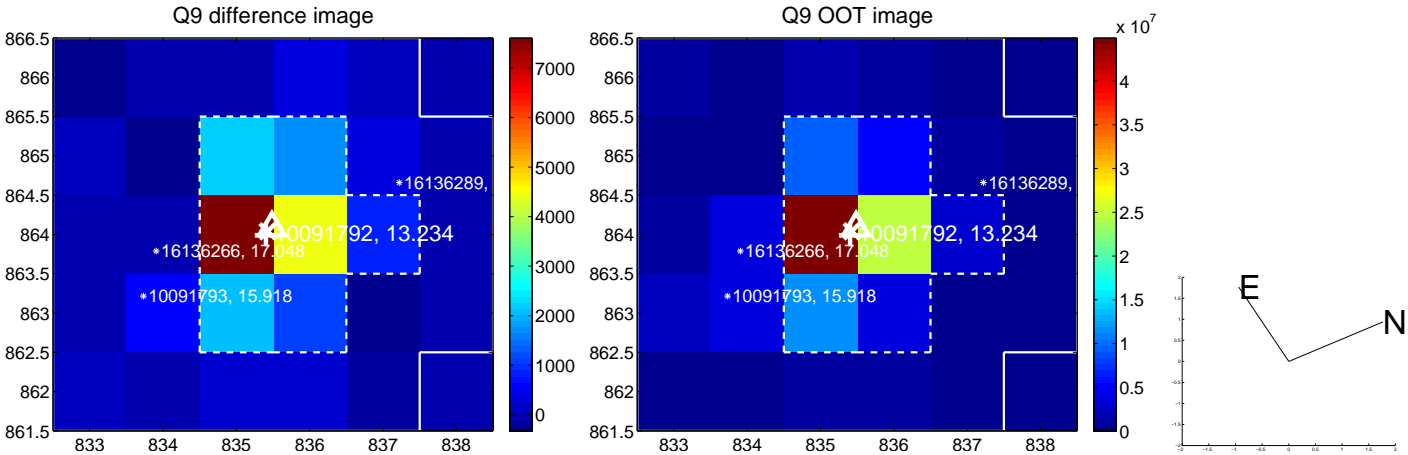
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



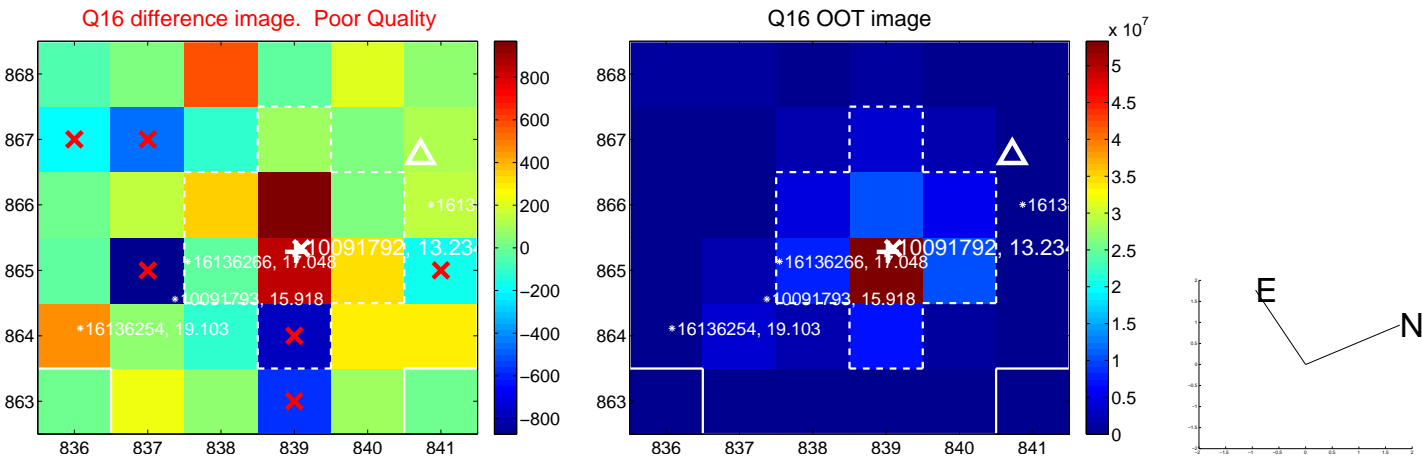
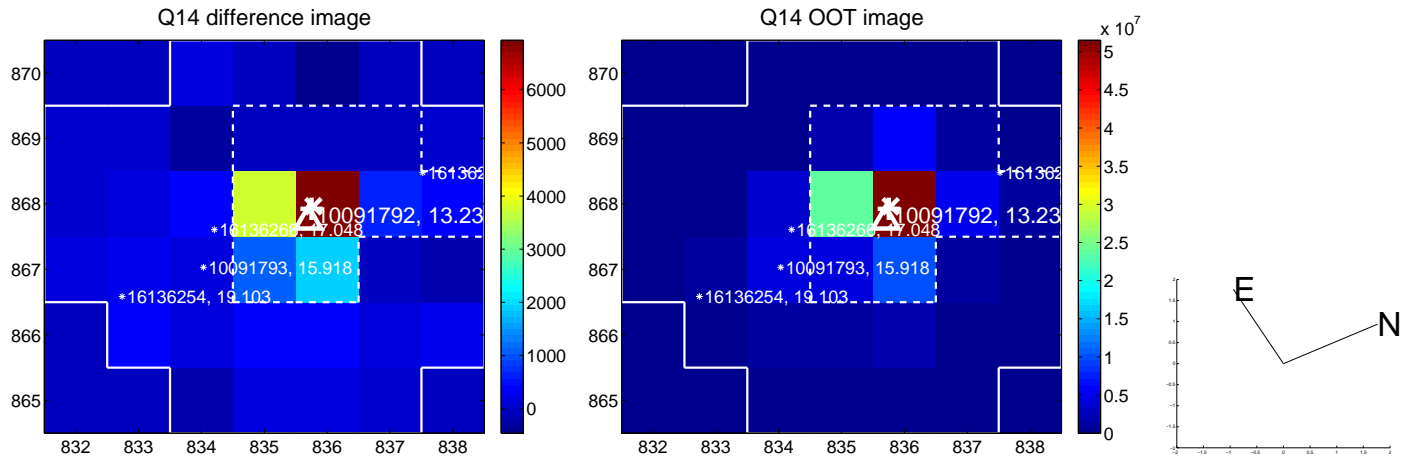
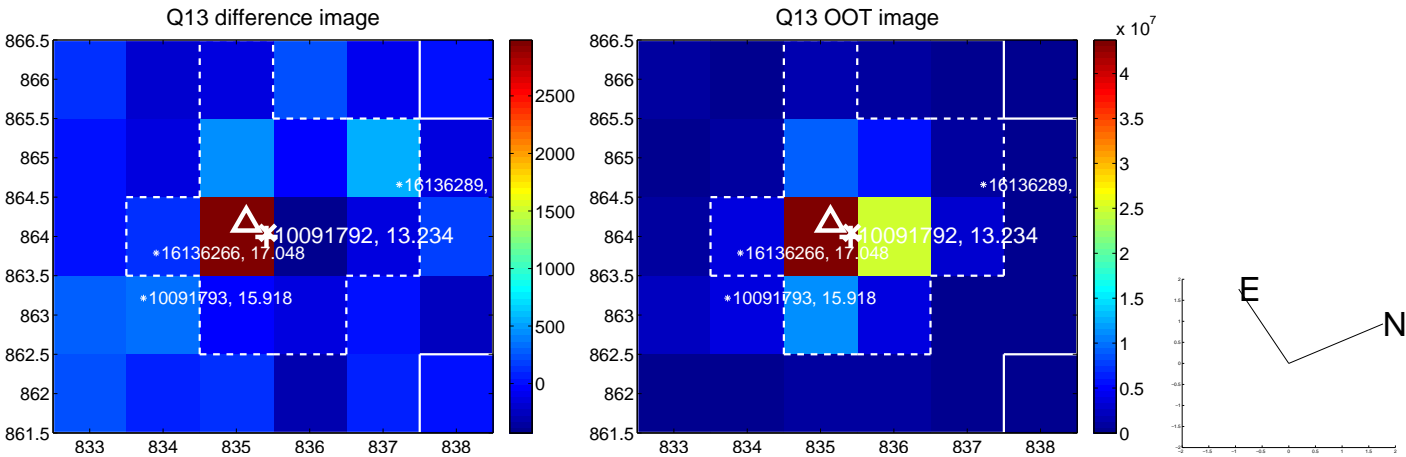
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



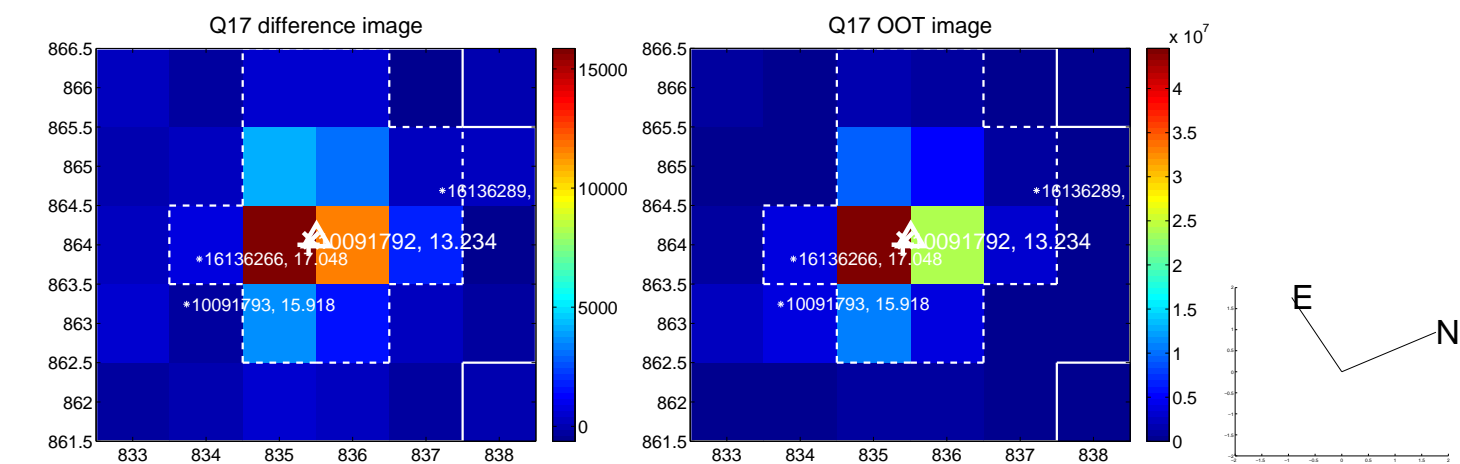
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



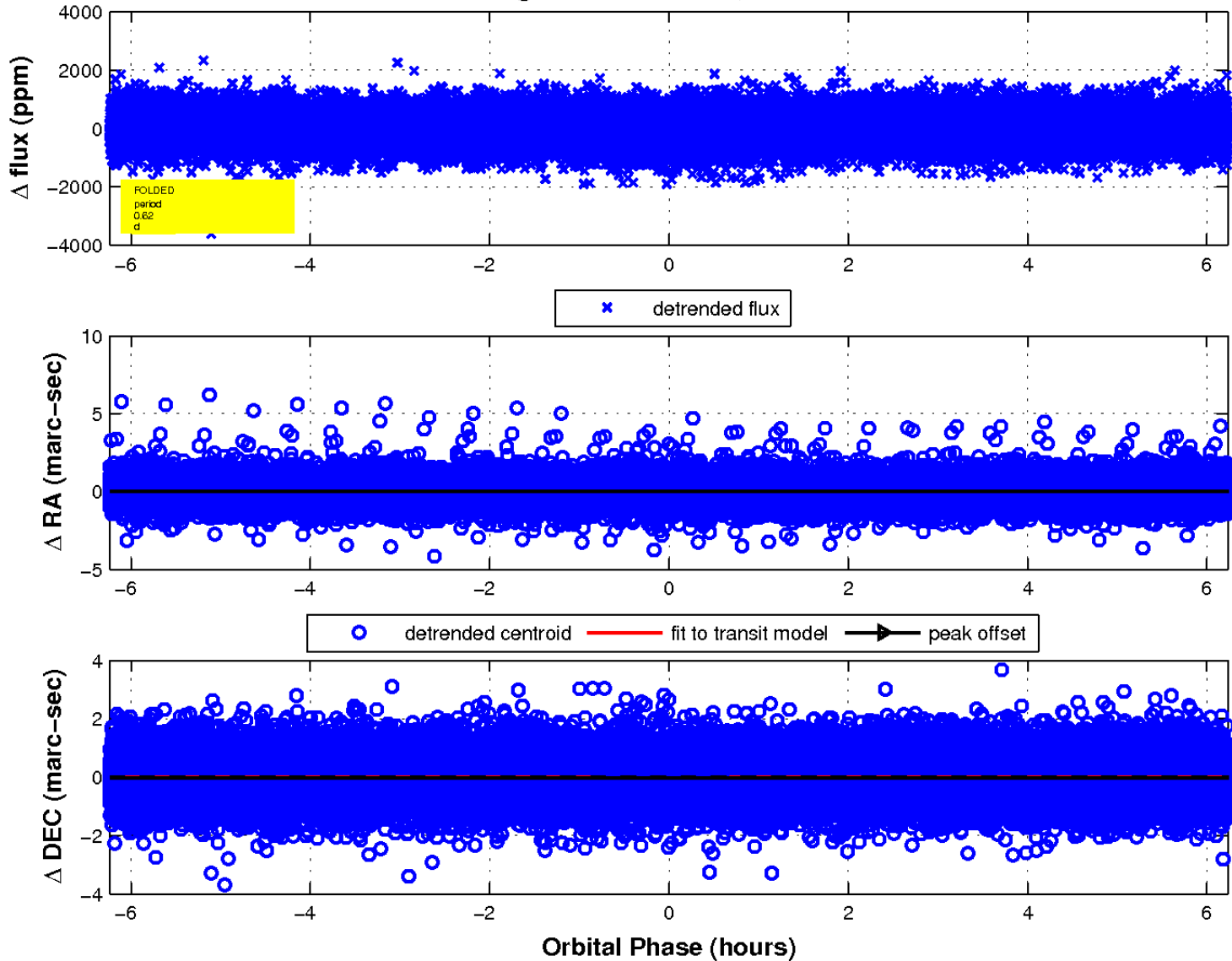
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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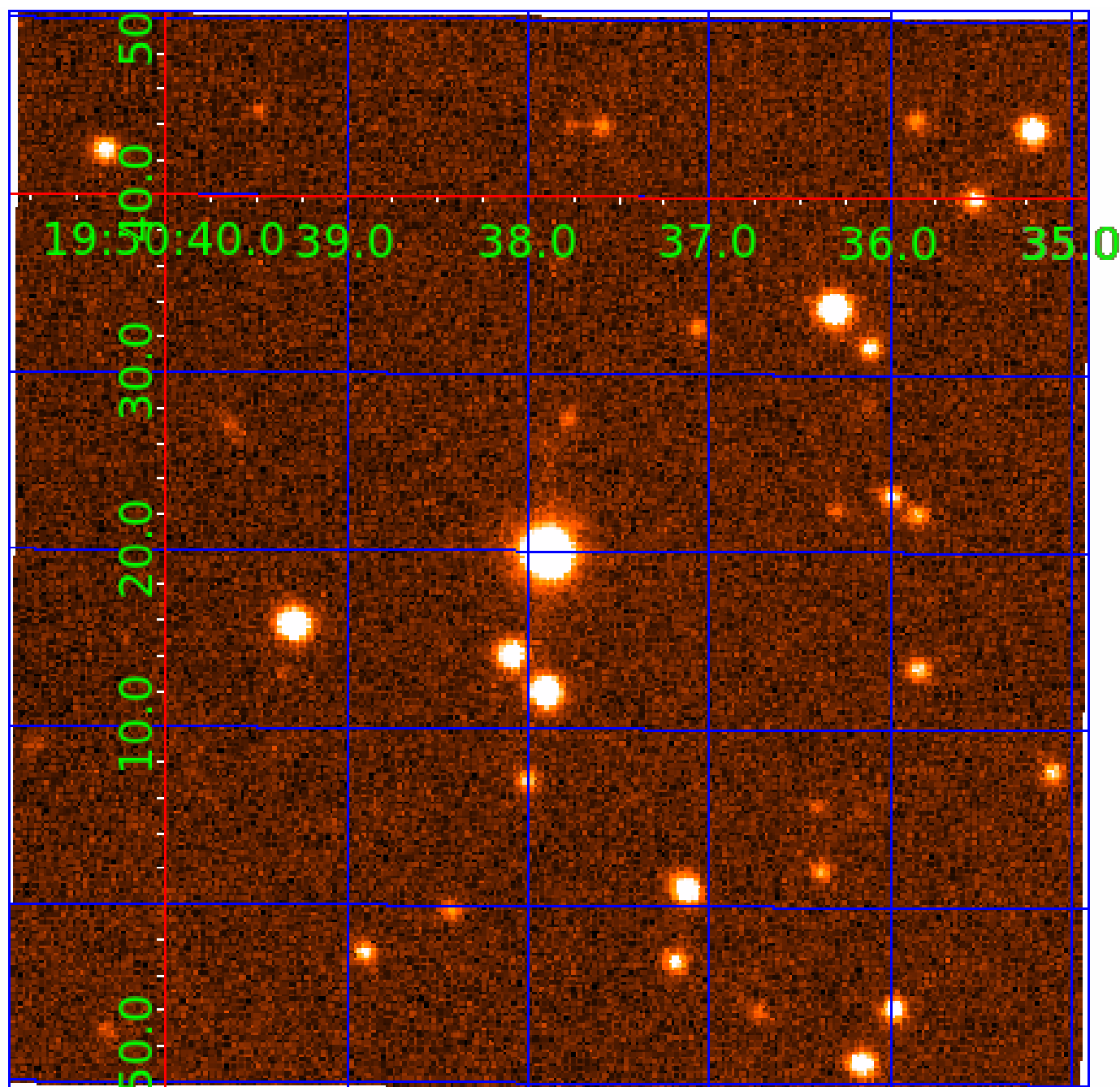


fluxWeightedCentroids, Planet 1 of 4



UKIRT Image

Declination



KIC 010091792

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
010091792-01	OBS	No	0.615403	131.760962	59.7	2.080	11.1	12.5	1.57	7209	1.41	22442.92
010091792-02	OBS	No	0.615400	132.076789	57.0	2.067	9.6	11.5	1.57	7209	1.37	22443.02
010091792-03	OBS	No	27.288357	142.021630	1269.0	0.528	9.3	9.3	1.57	7209	6.03	143.00
010091792-04	OBS	No	28.898581	152.405754	810.1	3.332	7.9	6.9	1.57	7209	4.54	132.47

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010091792-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
010091792-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
010091792-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV
010091792-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_TER_ALT—MOD_POS_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

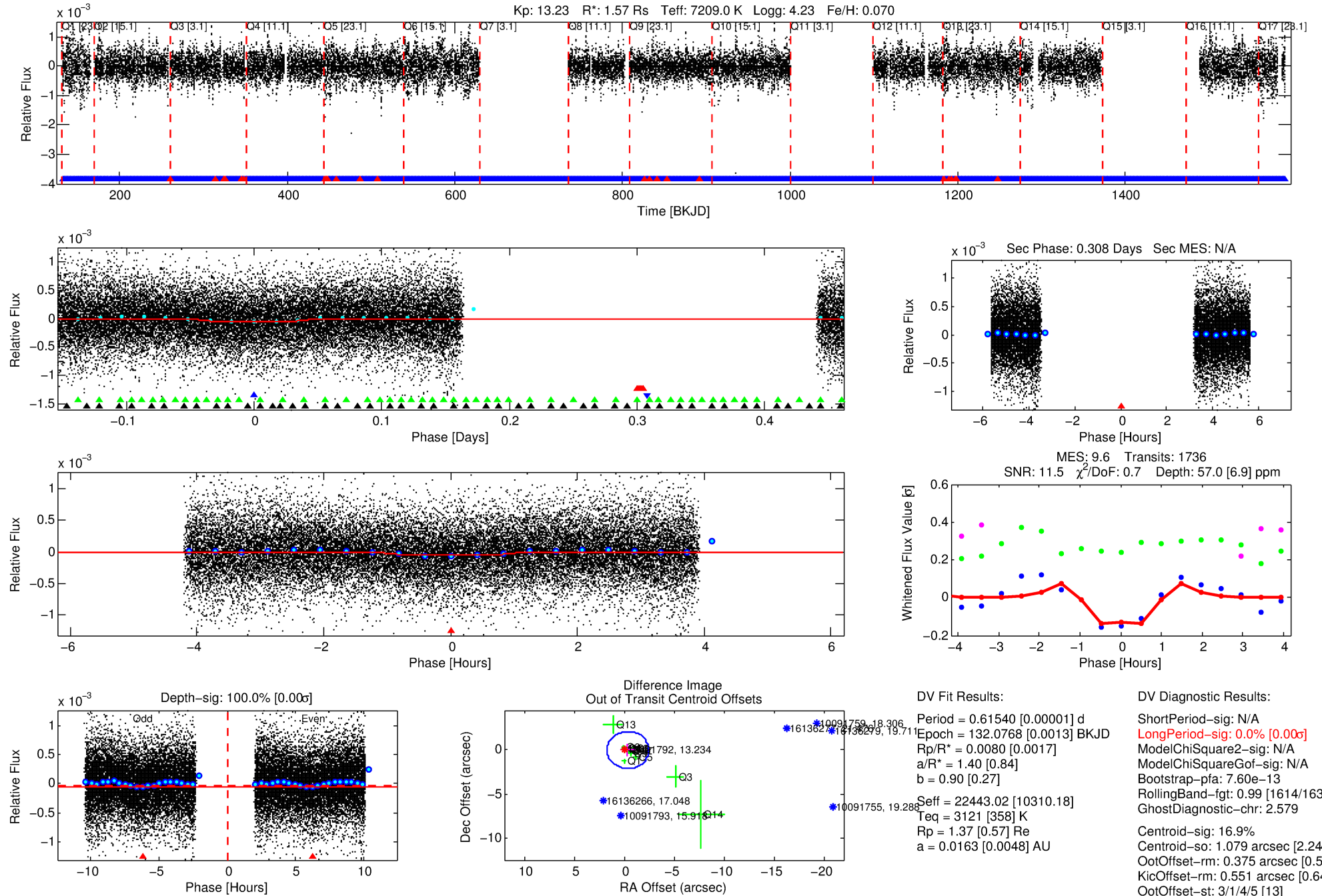
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010091792-02

No Significant Match Found

DV One-Page Summary

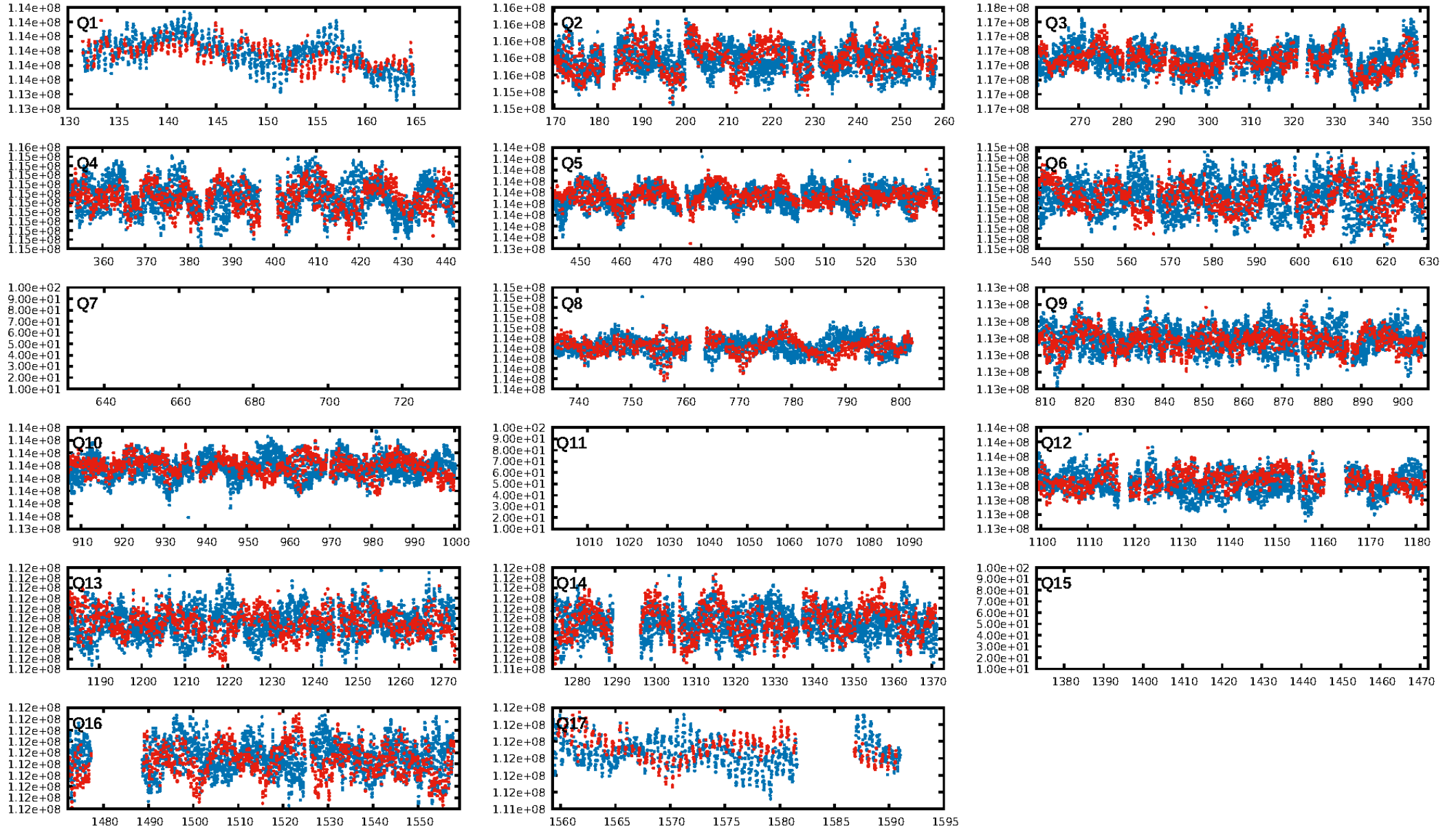
KIC: 10091792 Candidate: 2 of 4 Period: 0.615 d



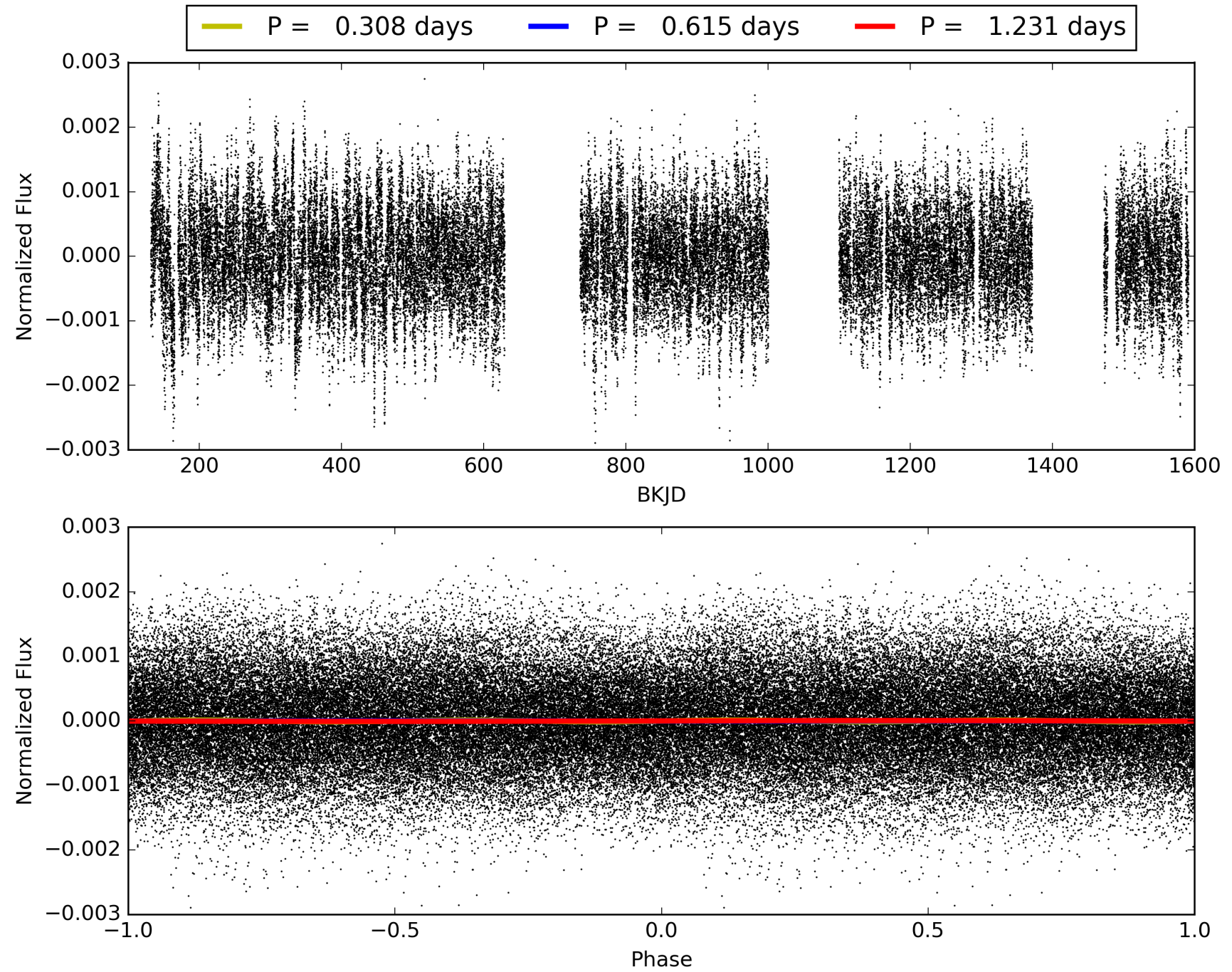
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010091792-02, PDC Light Curves

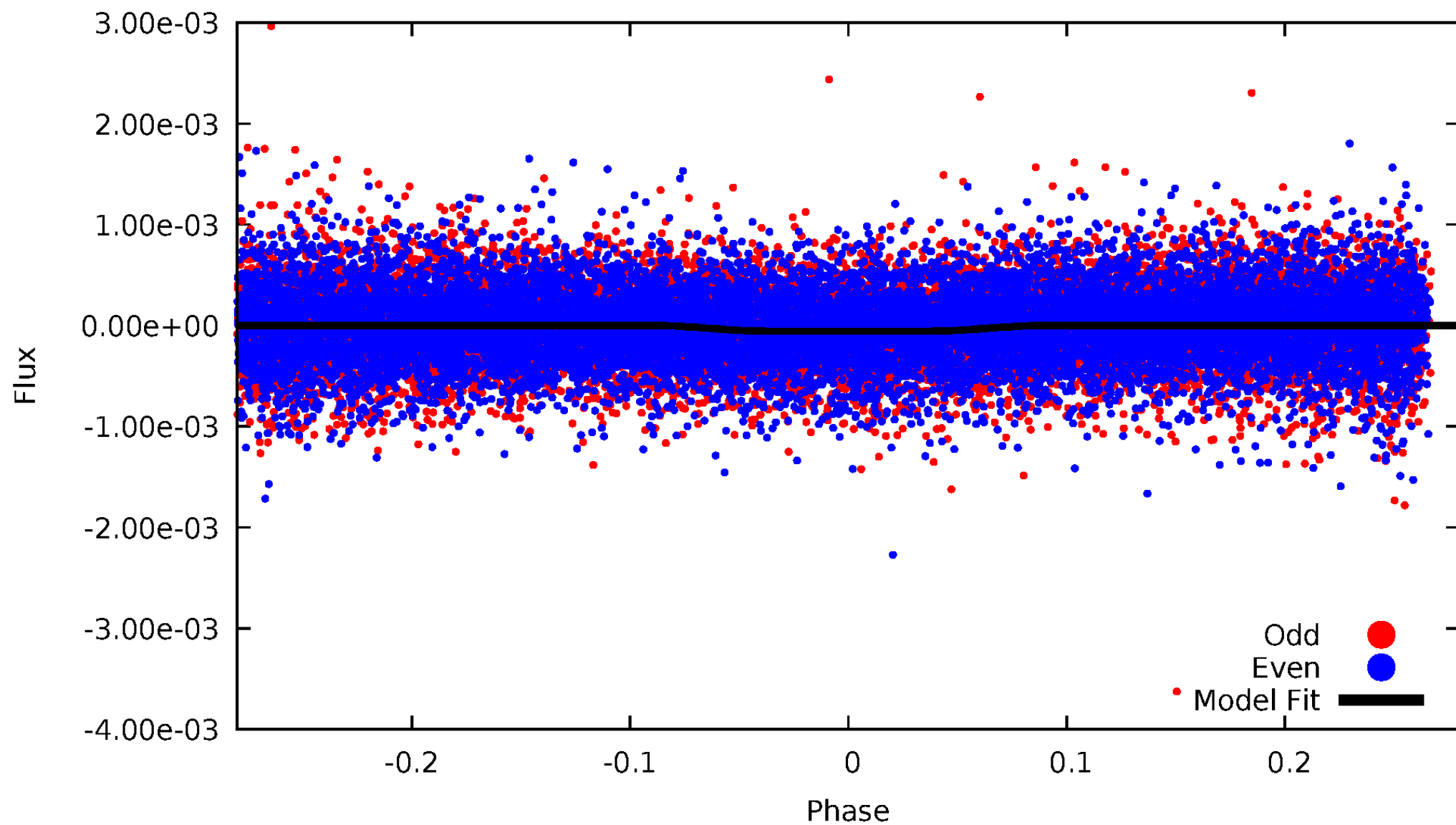


TCE 010091792-02



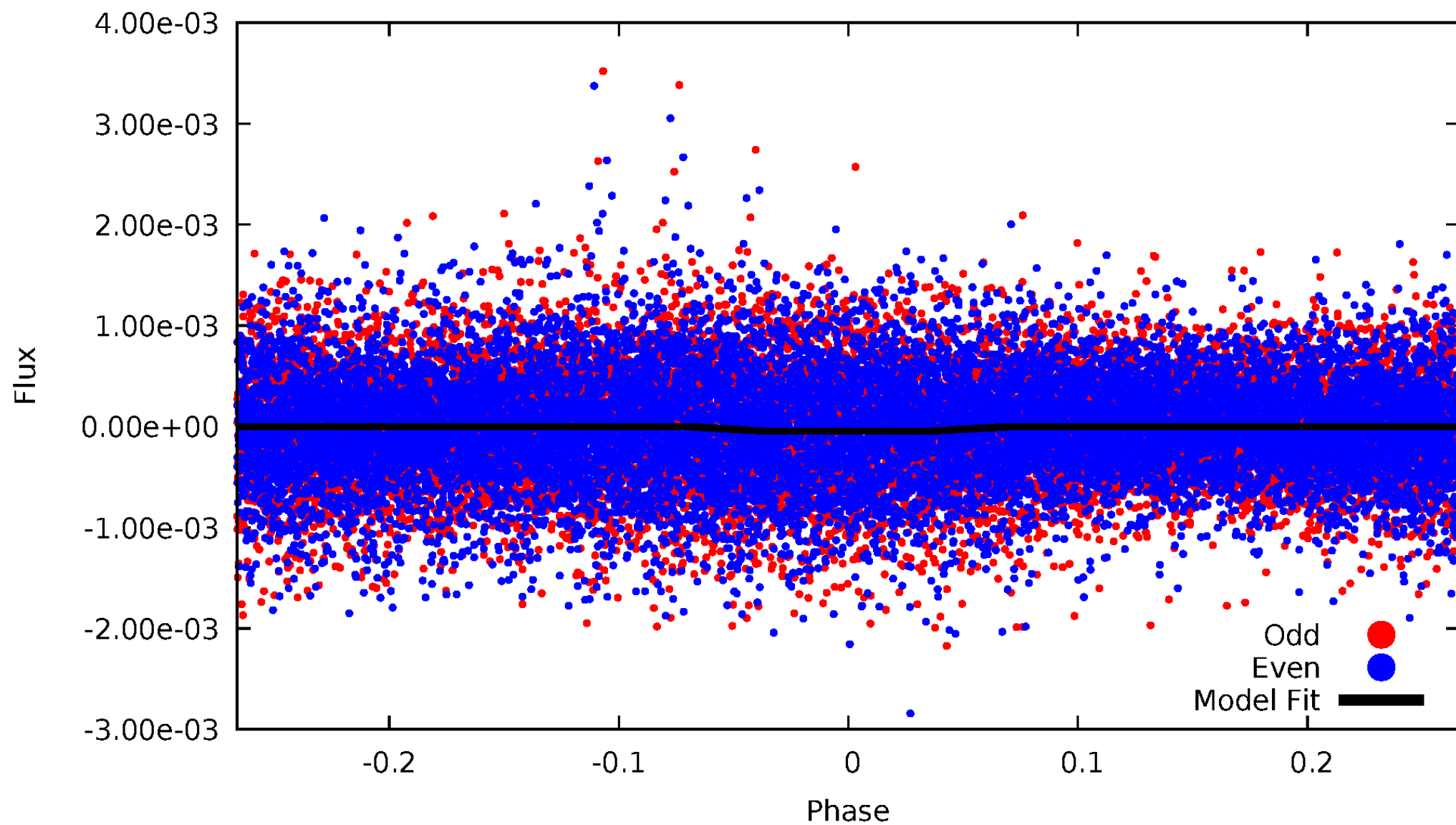
DV Odd/Even

TCE 010091792-02



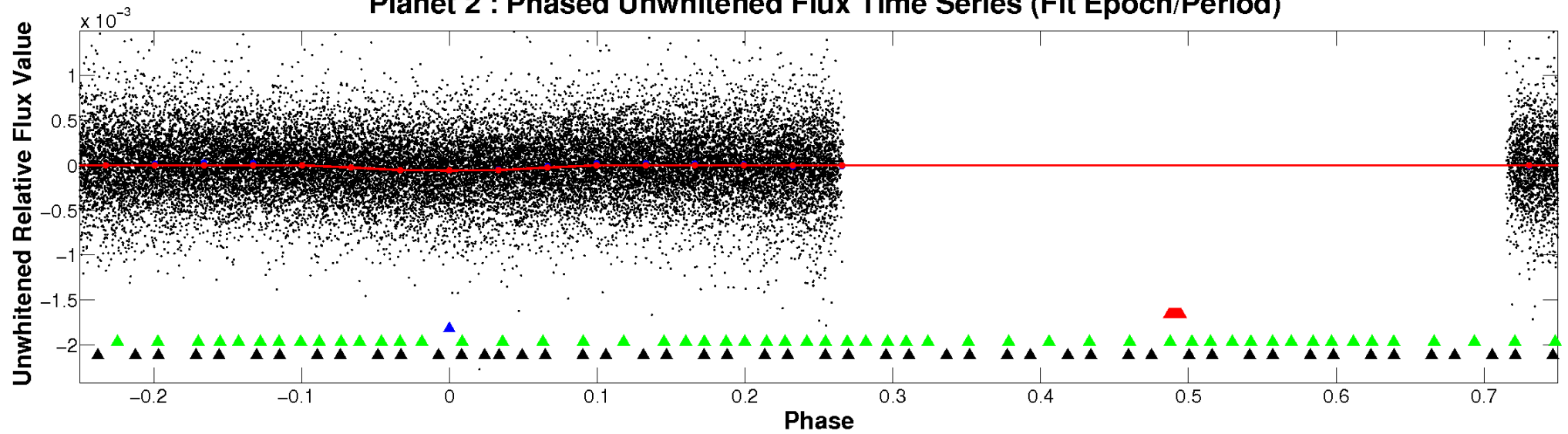
ALT Odd/Even

TCE 010091792-02

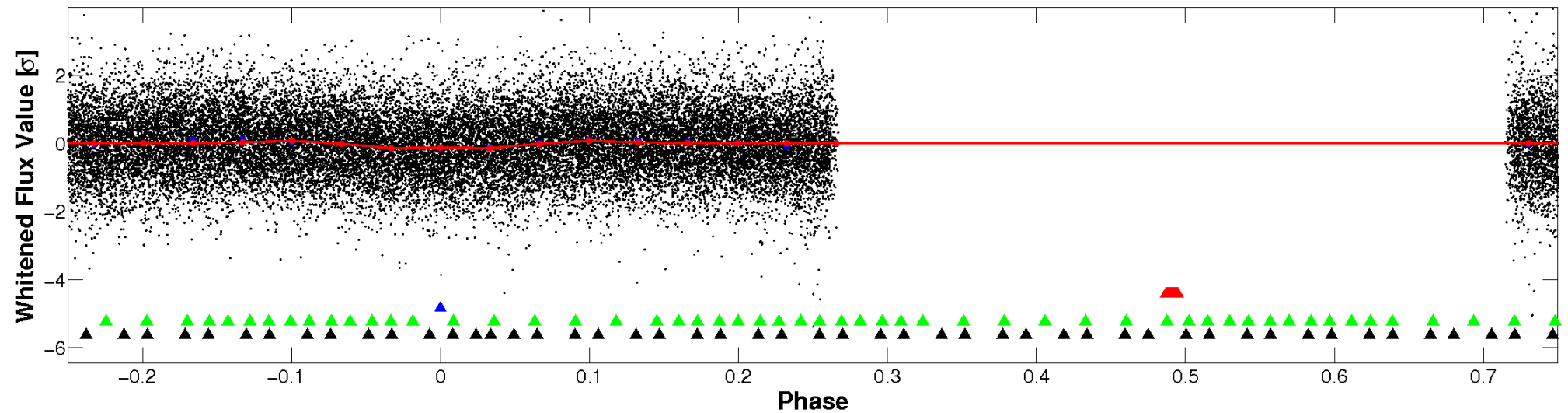


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

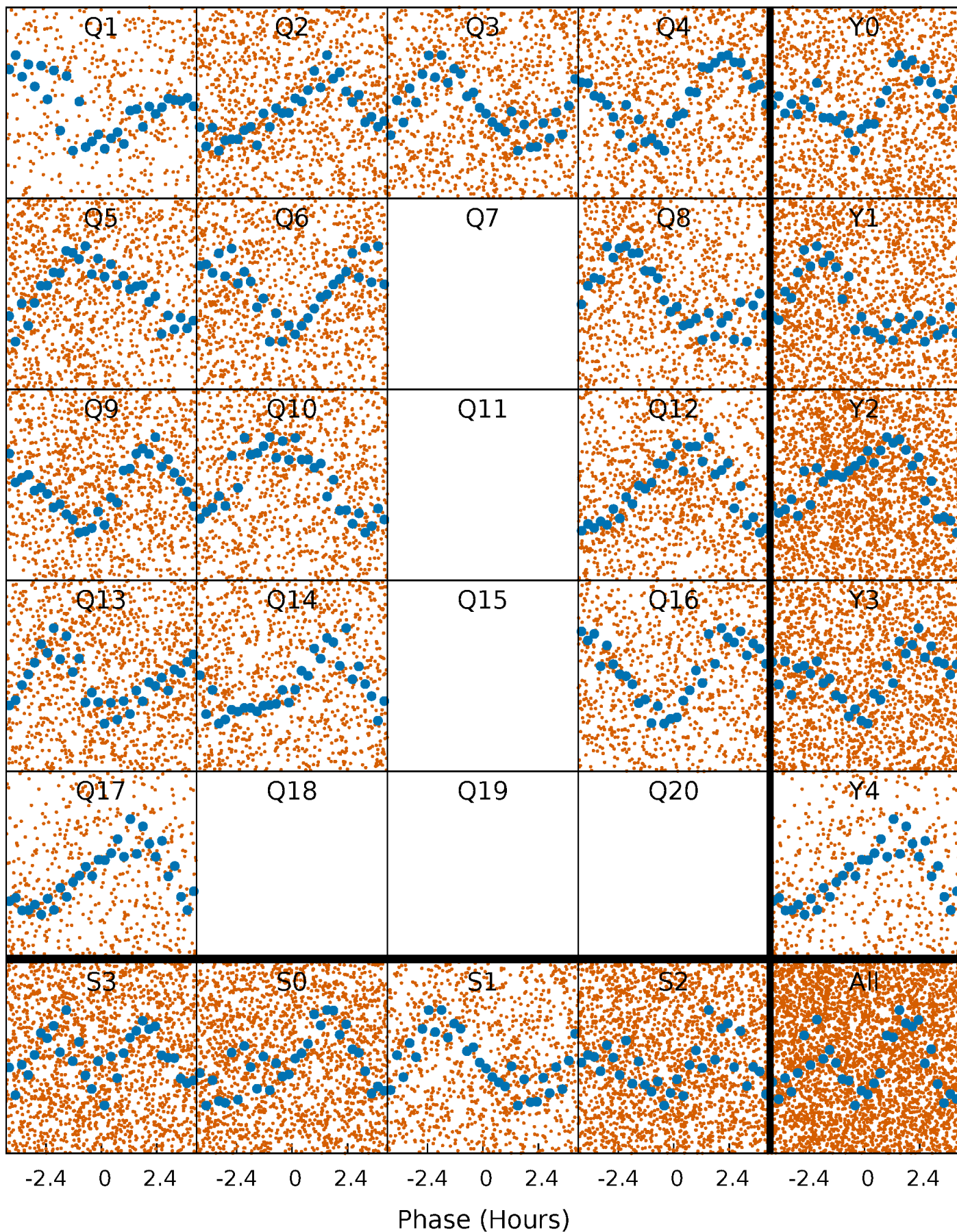


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



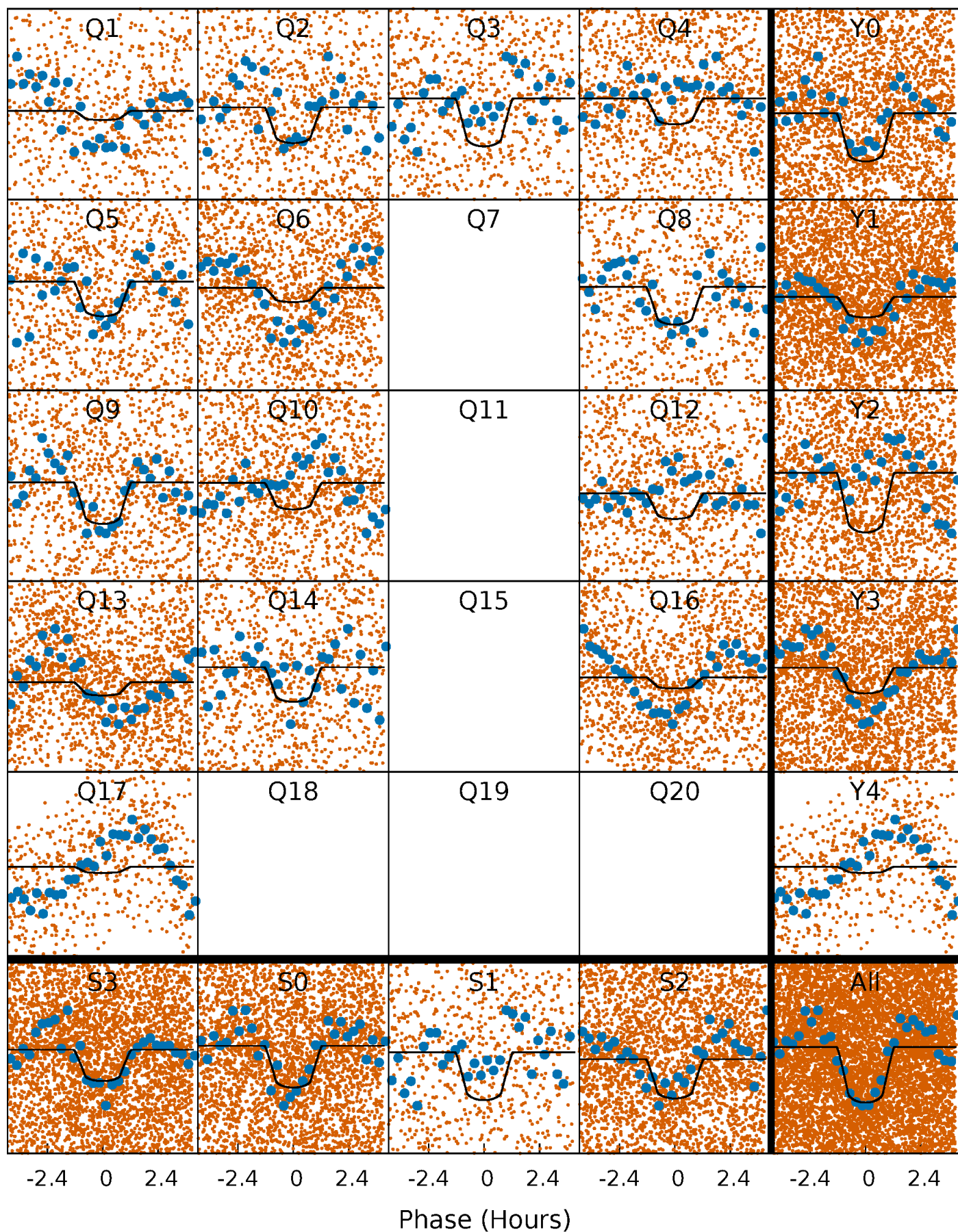
PDC Quarter-Phased Transit Curves

TCE 010091792-02 P= 0.615400 Days $T_0=132.076789$ (BKJD)



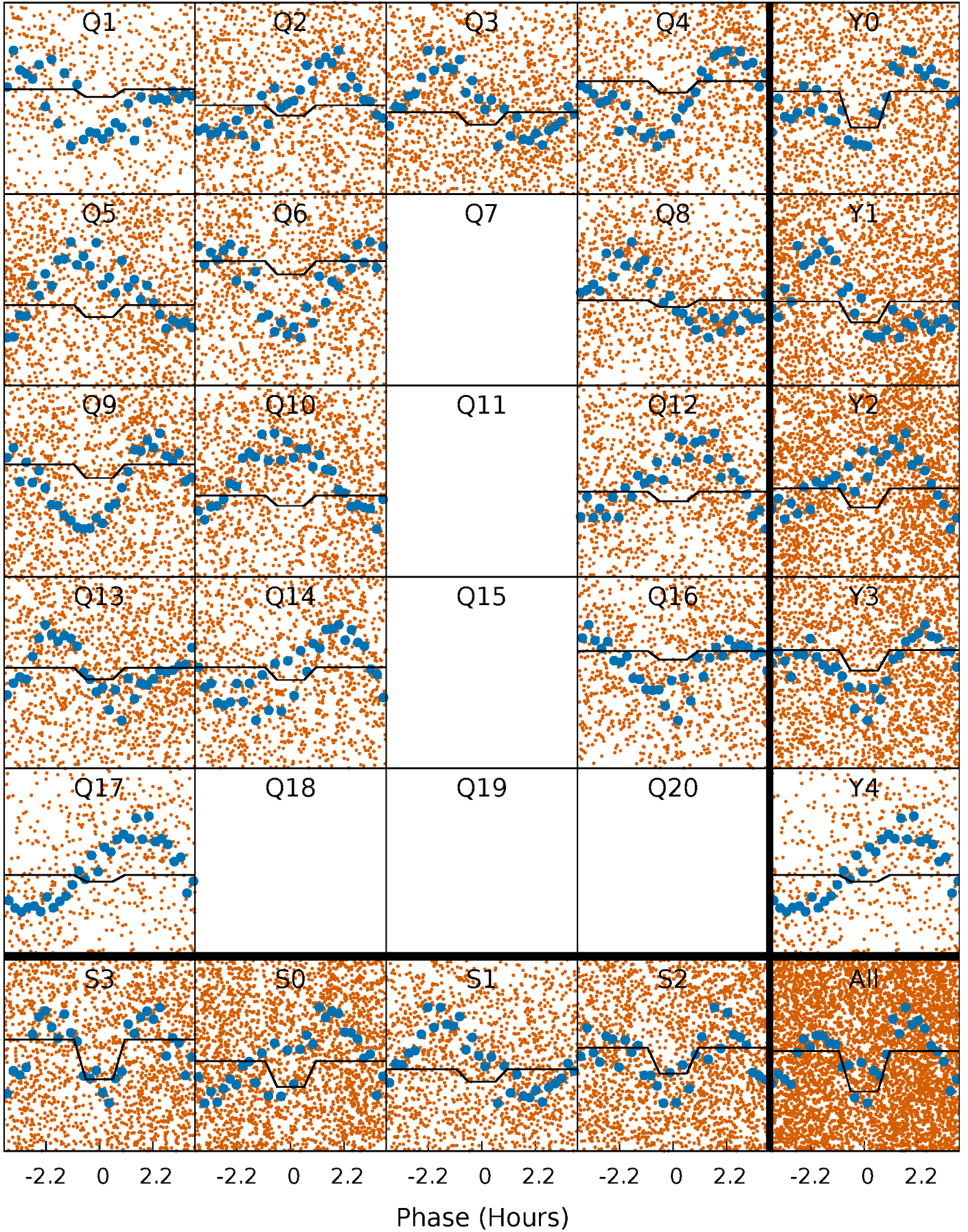
DV Quarter-Phased Transit Curves

TCE 010091792-02 P= 0.615400 Days $T_0=132.076789$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

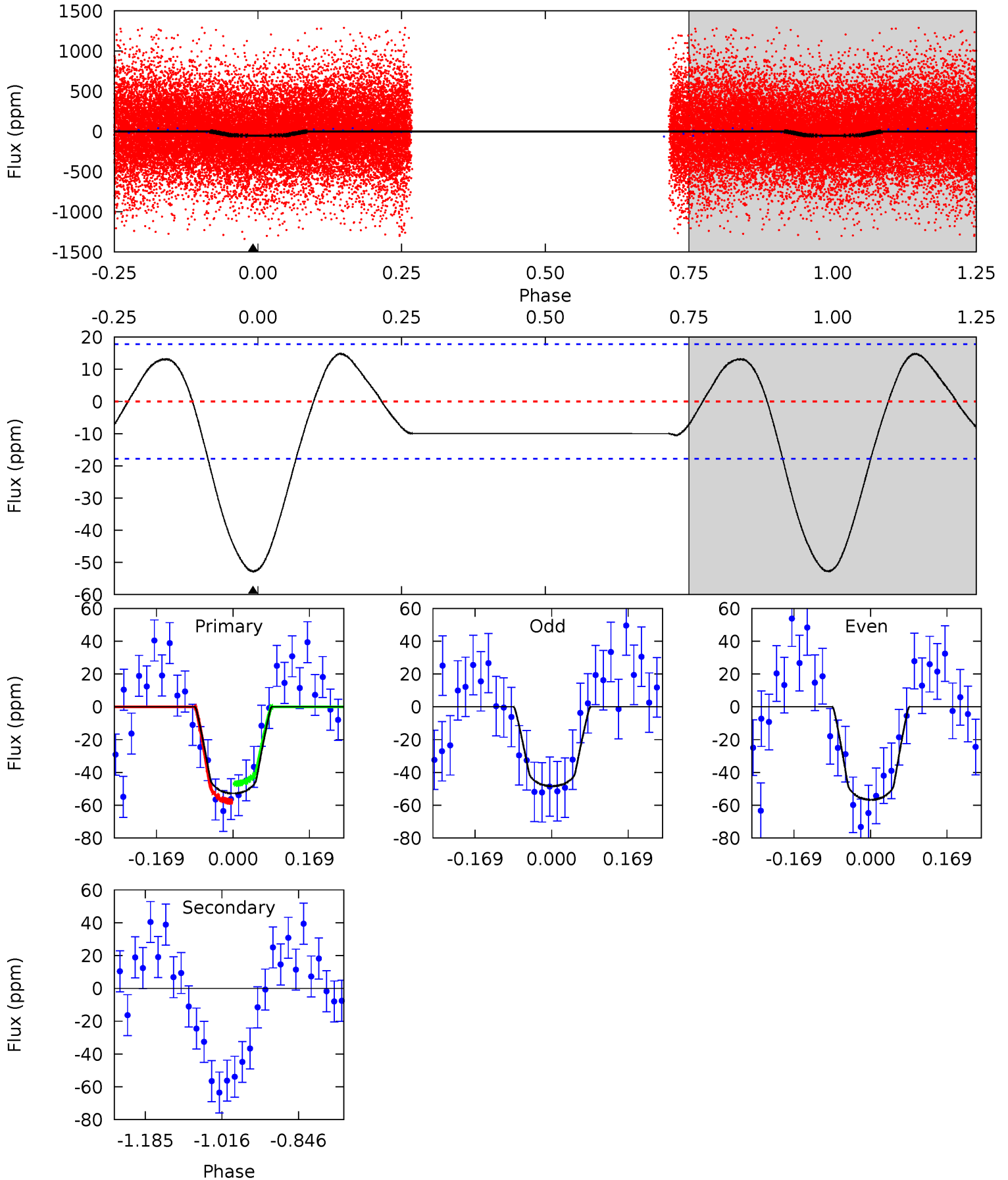
TCE 010091792-02 P= 0.615397 Days $T_0=132.074516$ (BKJD)



DV Model-Shift Uniqueness Test

010091792-02, P = 0.615400 Days, E = 131.461389 Days

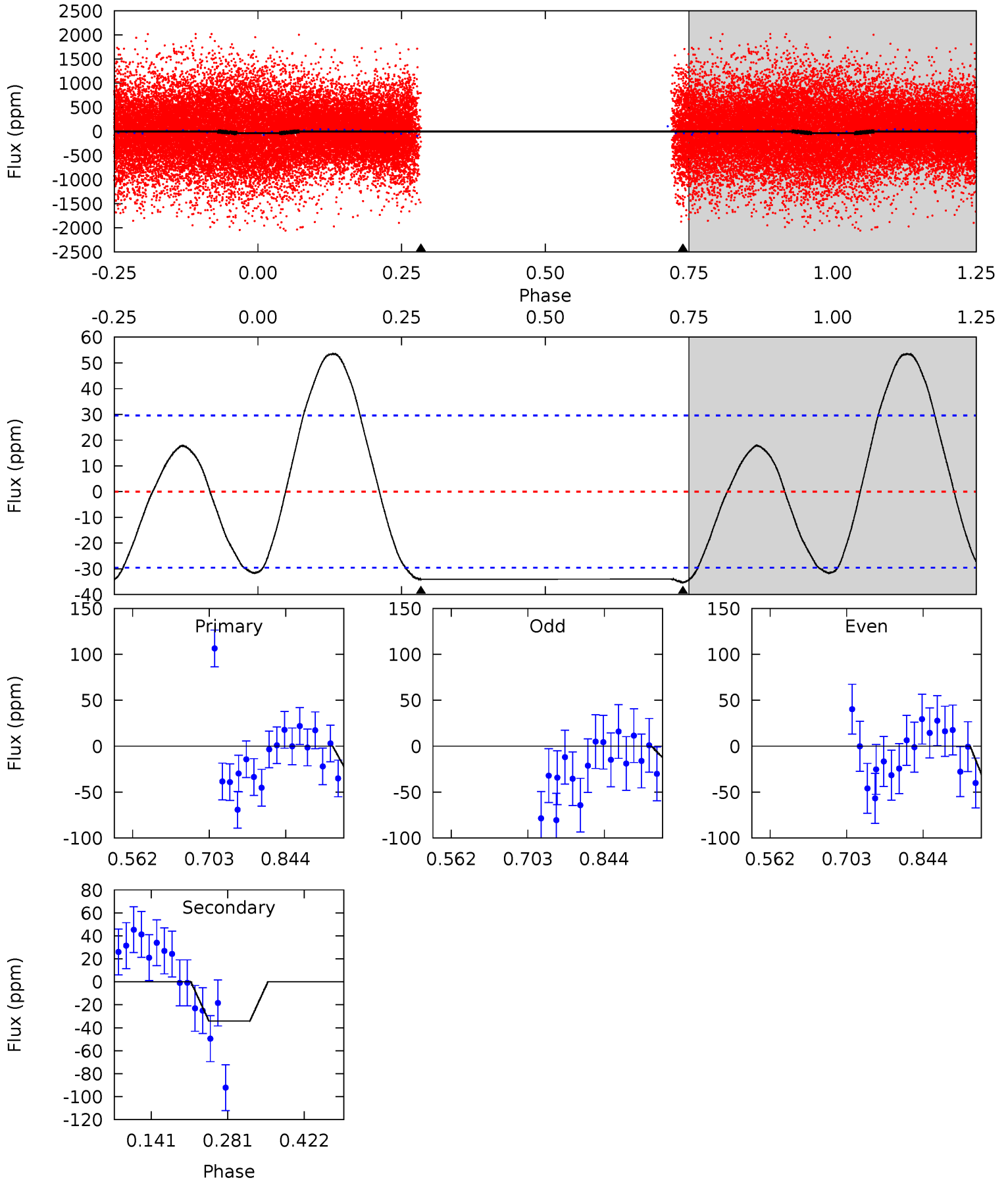
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	0	0	0	4.45	1.37	1.86	13.2	13.2	0	0	1.04	1.35	0.22	1.54



Alt Model-Shift Uniqueness Test

010091792-02, P = 0.615397 Days, E = 131.459119 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.38	5.19	0	0	4.49	1.47	4.37	5.38	5.38	5.19	5.19	2.28	1.23	0.60	0.18



Stellar Parameters For KIC 010091792

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7209^{+228}_{-371}	$4.229^{+0.072}_{-0.217}$	$0.070^{+0.200}_{-0.350}$	$1.568^{+0.565}_{-0.242}$	$1.517^{+0.233}_{-0.211}$	$0.555^{+0.234}_{-0.314}$
	+3%/-5%	+2%/-5%	+286%/-500%	+36%/-15%	+15%/-14%	+42%/-57%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010091792-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 4	$1.43^{+0.37}_{-0.34}$	4424^{+347}_{-259}	-3966^{+6440}_{-525}	$-0.005^{+0.312}_{-0.276}$
Alt.	-34 ± 7	$1.23^{+0.35}_{-0.34}$	4451^{+343}_{-295}	6397^{+1342}_{-856}	$3.227^{+3.136}_{-1.330}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

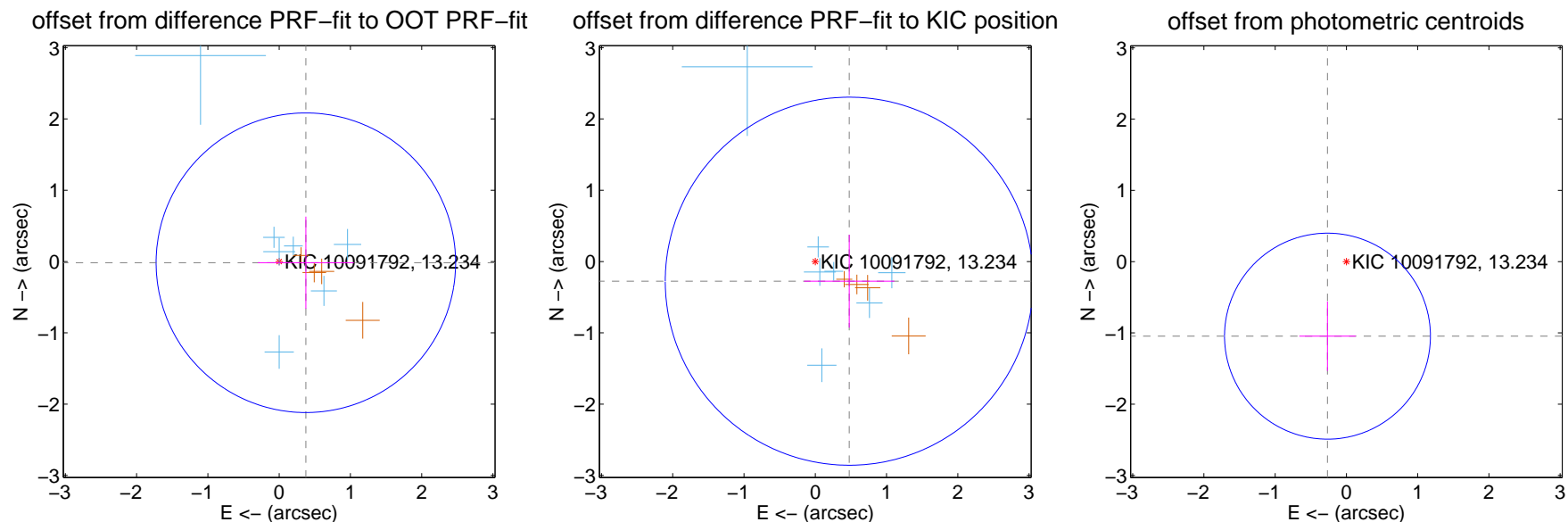
DV Centroid Data

Supplemental centroid analysis for 010091792-02. Kepler magnitude: 13.23. Transit SNR 11.46

There are 7 quarters with good PRF difference image offsets

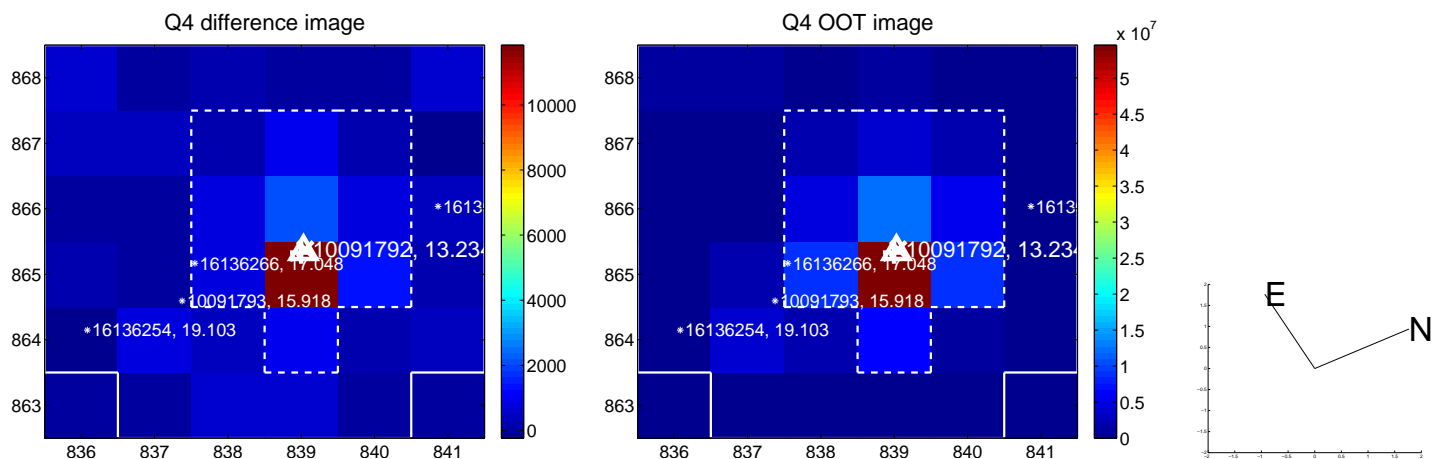
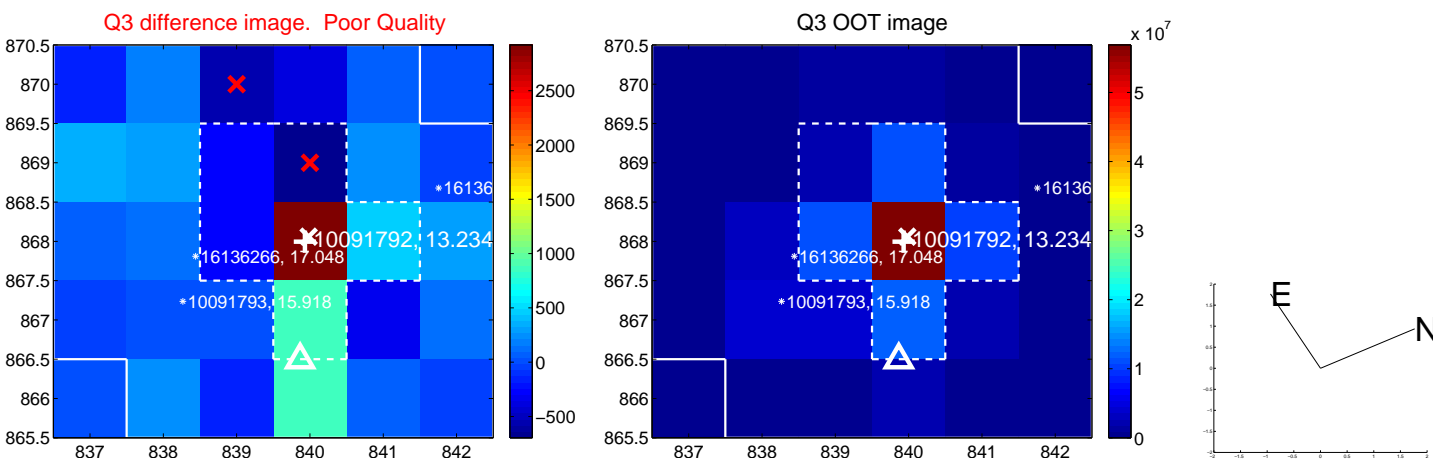
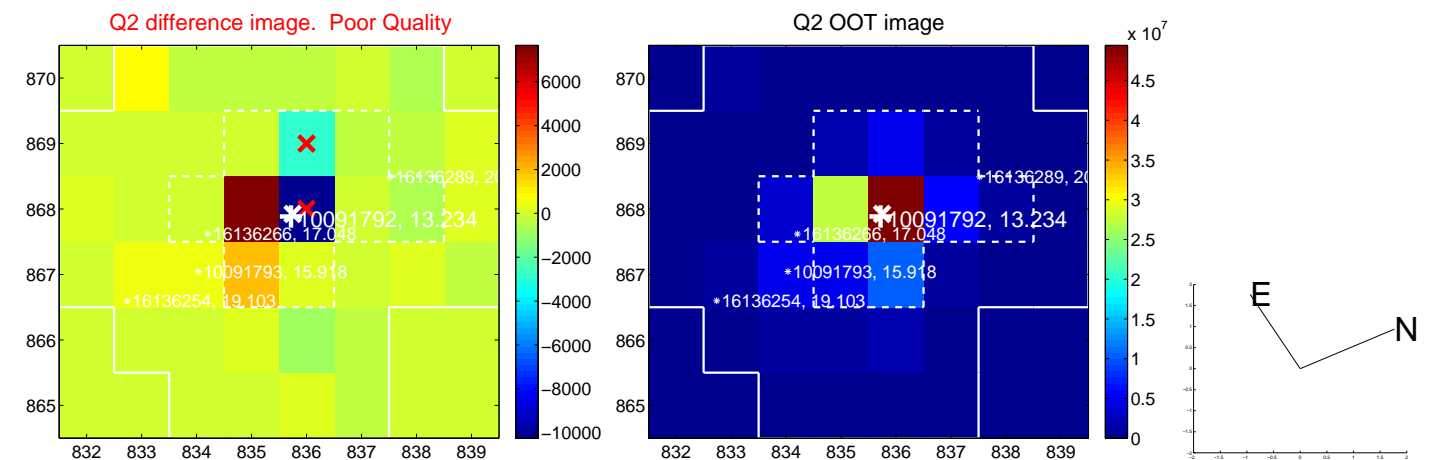
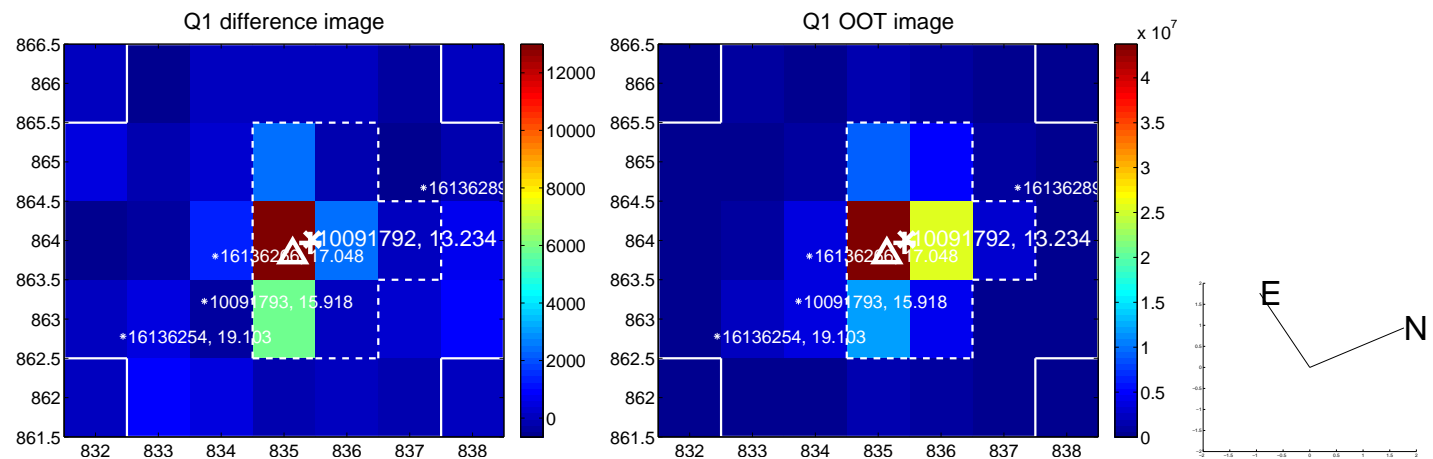
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.375 ± 0.700	0.54	-0.375 ± 0.674	-0.017 ± 0.647
PRF-fit source offset from KIC position	0.551 ± 0.861	0.64	-0.477 ± 0.633	-0.276 ± 0.651
photometric centroid source offset	1.08 ± 0.48	2.24	0.27 ± 0.40	-1.05 ± 0.49

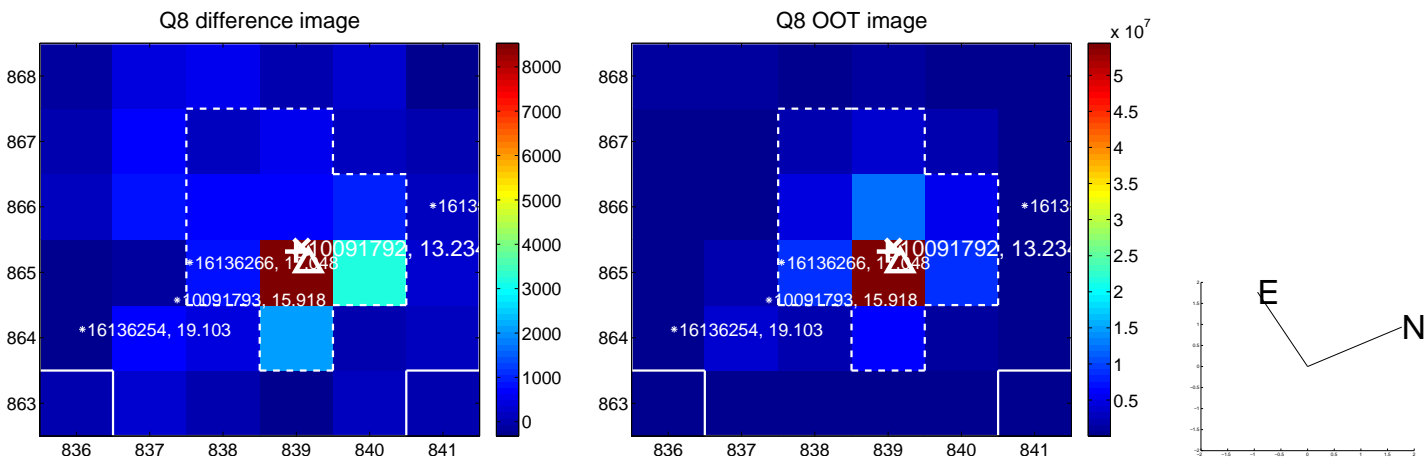
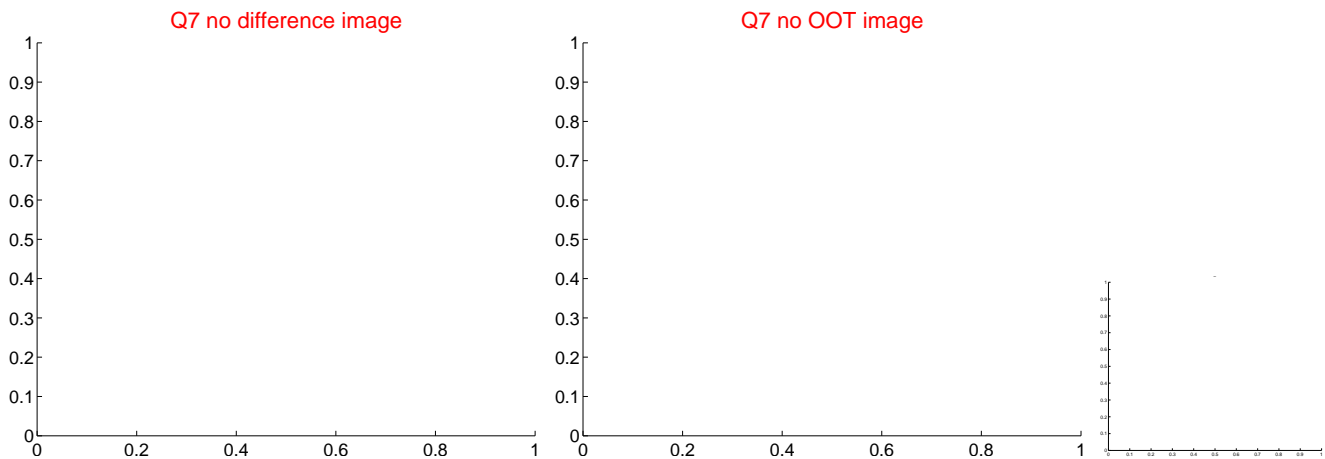
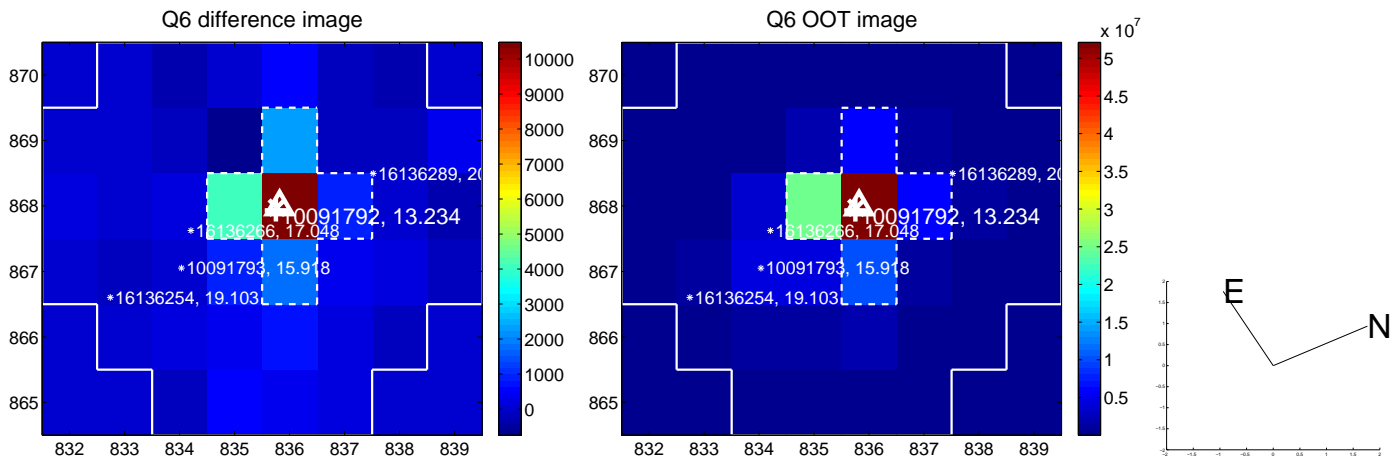
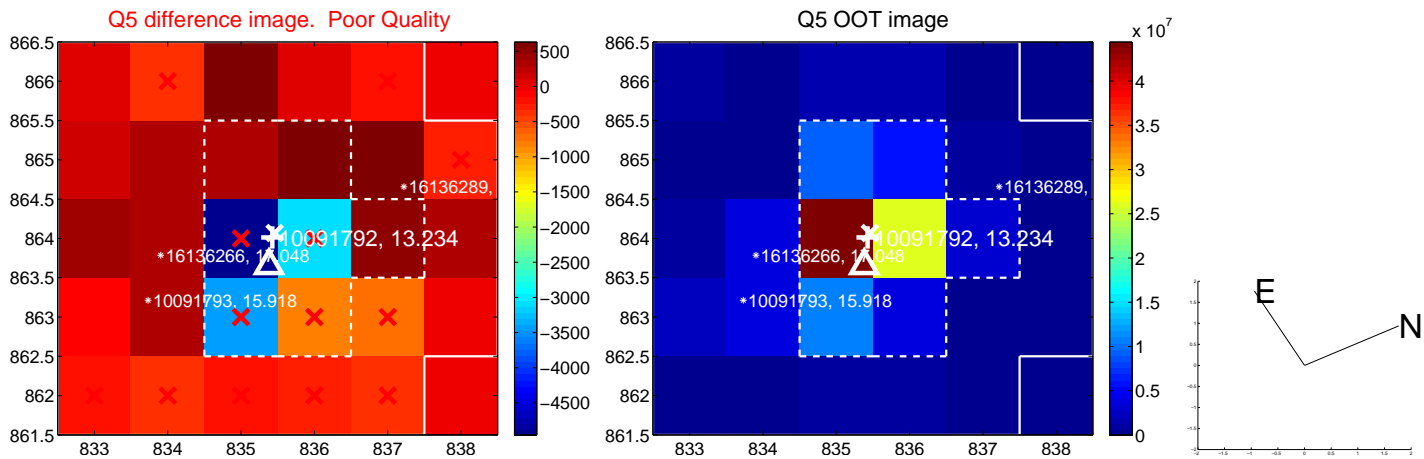


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

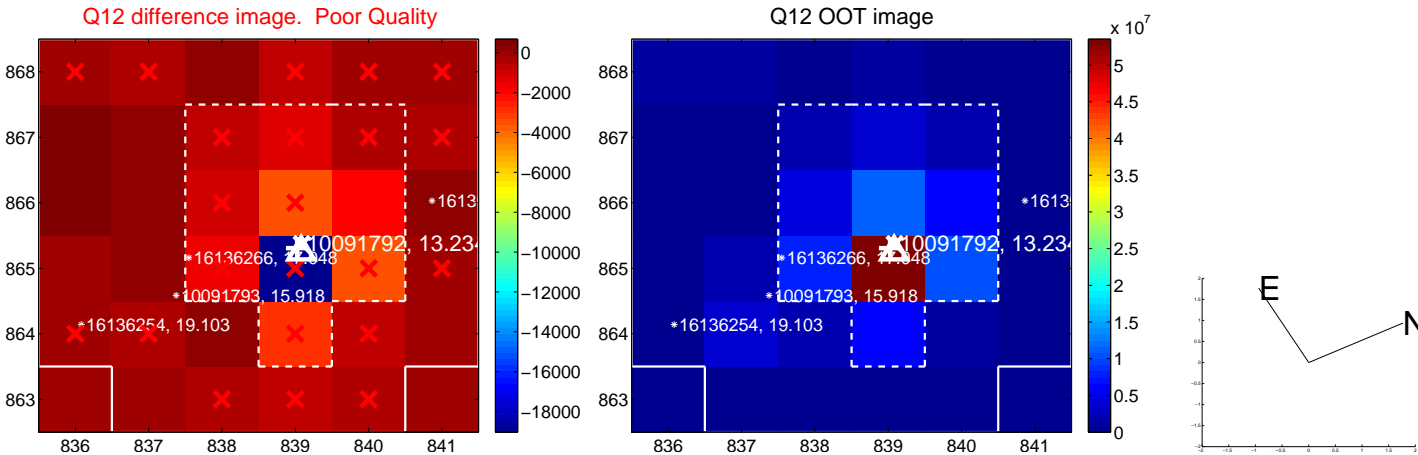
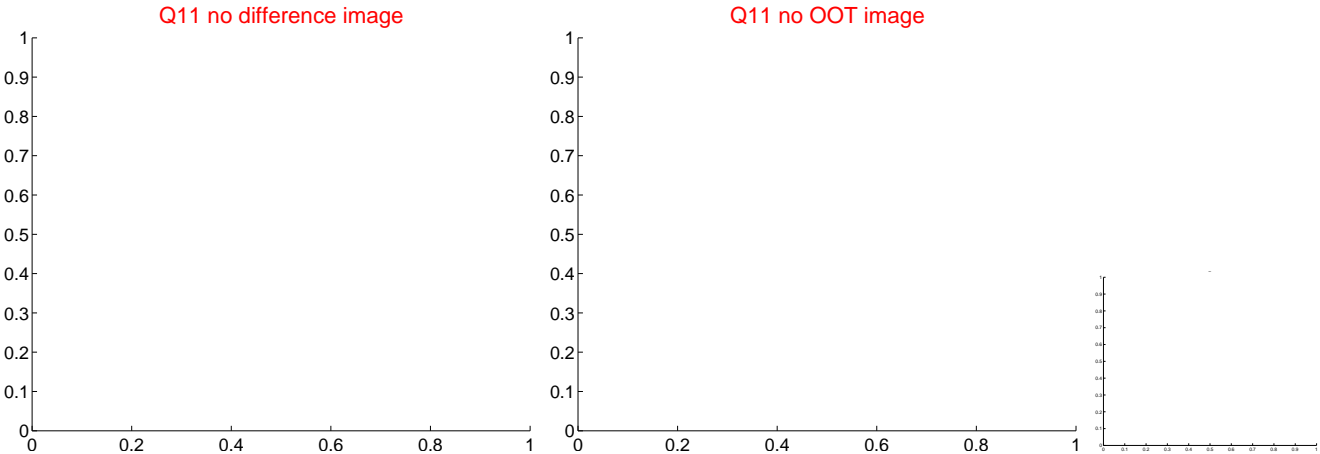
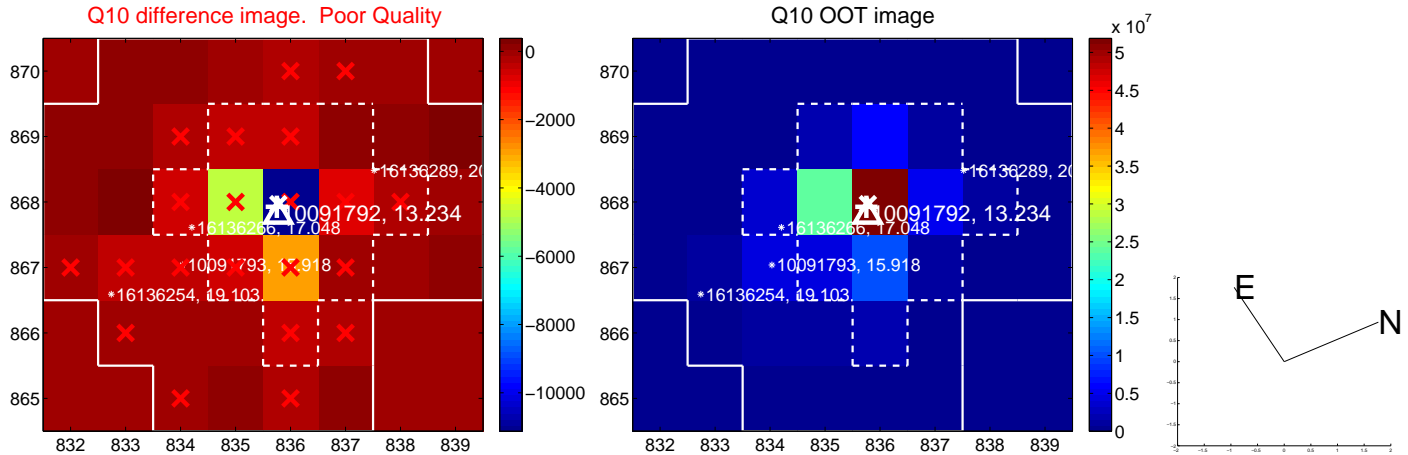
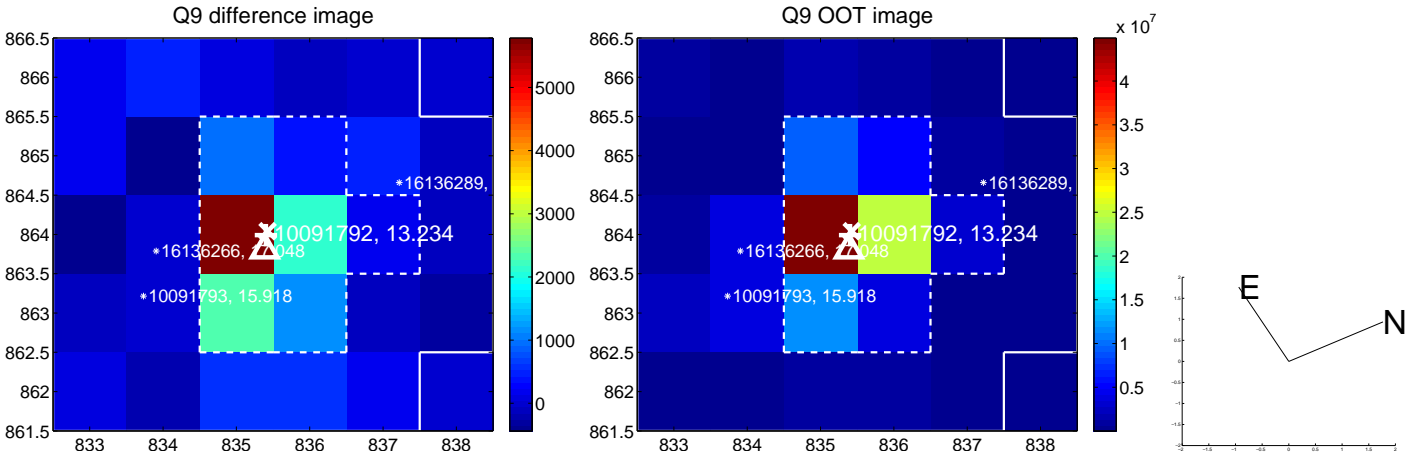
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



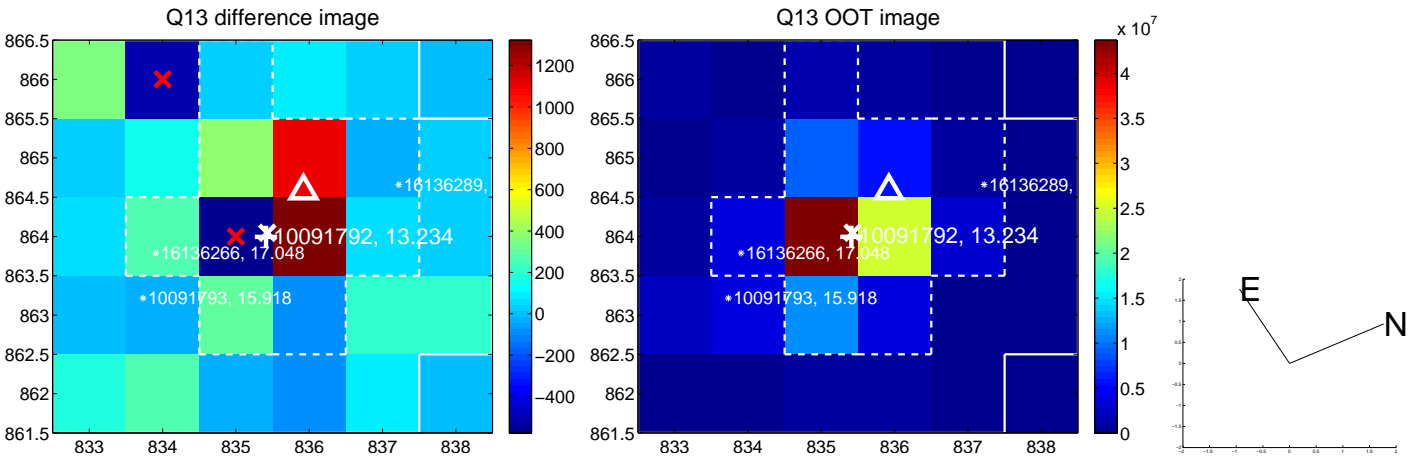
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



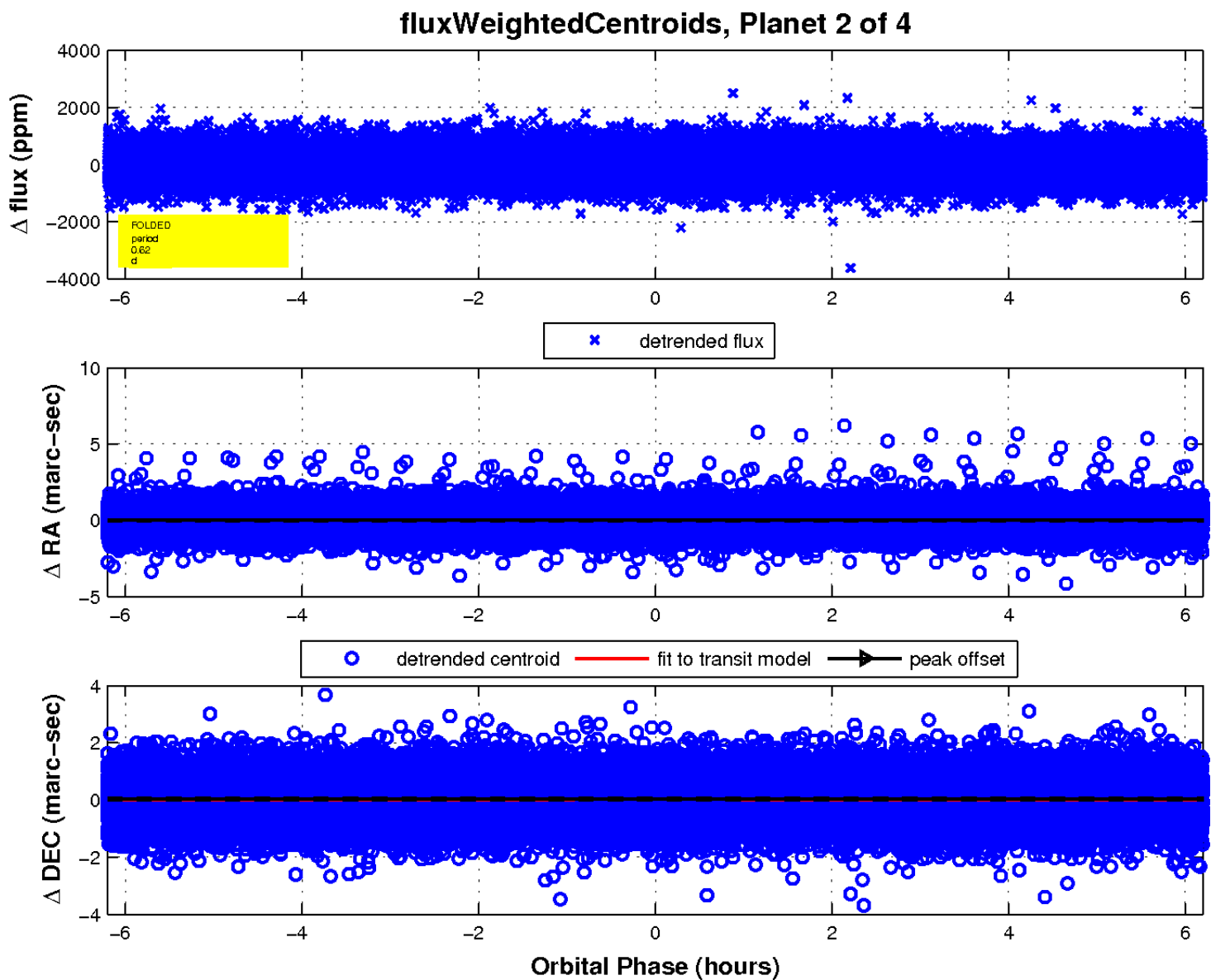
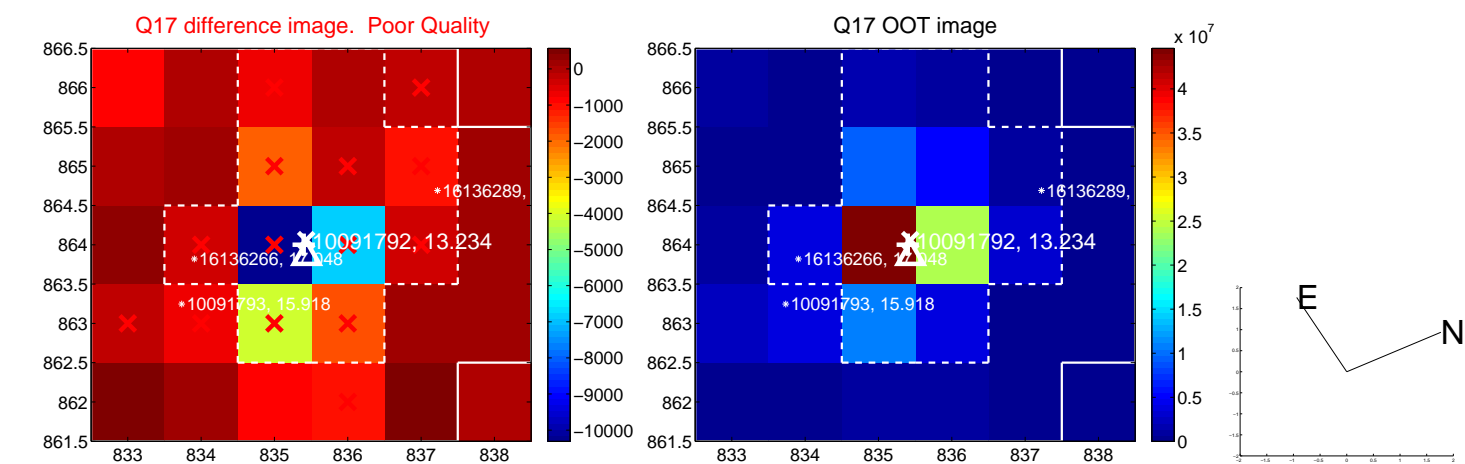
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

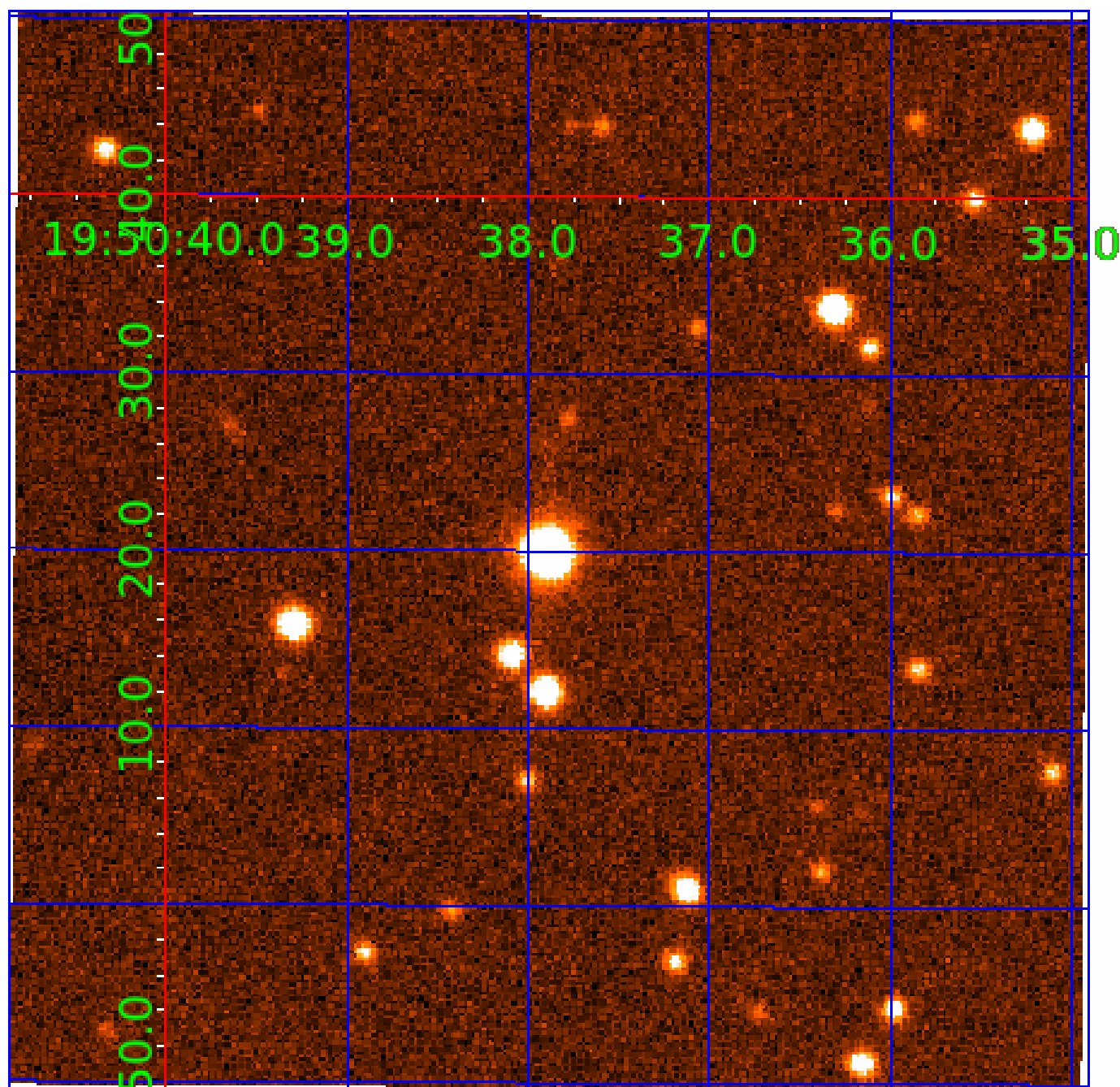


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010091792

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
010091792-01	OBS	No	0.615403	131.760962	59.7	2.080	11.1	12.5	1.57	7209	1.41	22442.92
010091792-02	OBS	No	0.615400	132.076789	57.0	2.067	9.6	11.5	1.57	7209	1.37	22443.02
010091792-03	OBS	No	27.288357	142.021630	1269.0	0.528	9.3	9.3	1.57	7209	6.03	143.00
010091792-04	OBS	No	28.898581	152.405754	810.1	3.332	7.9	6.9	1.57	7209	4.54	132.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010091792-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
010091792-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
010091792-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV
010091792-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_TER_ALT—MOD_POS_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

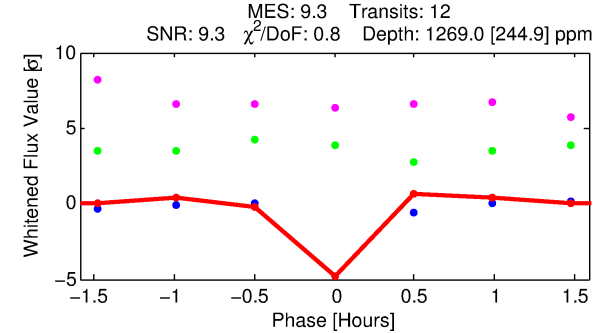
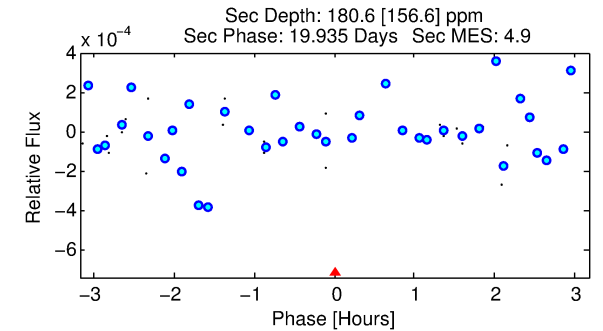
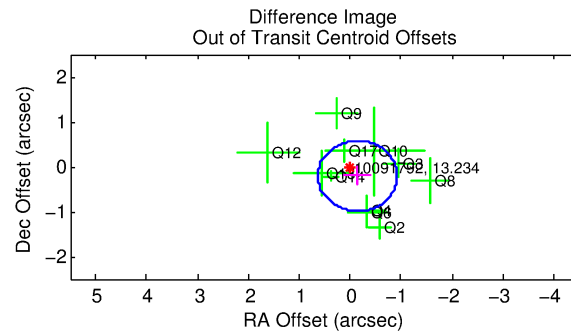
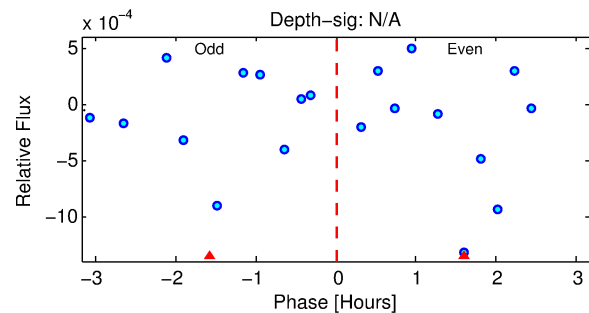
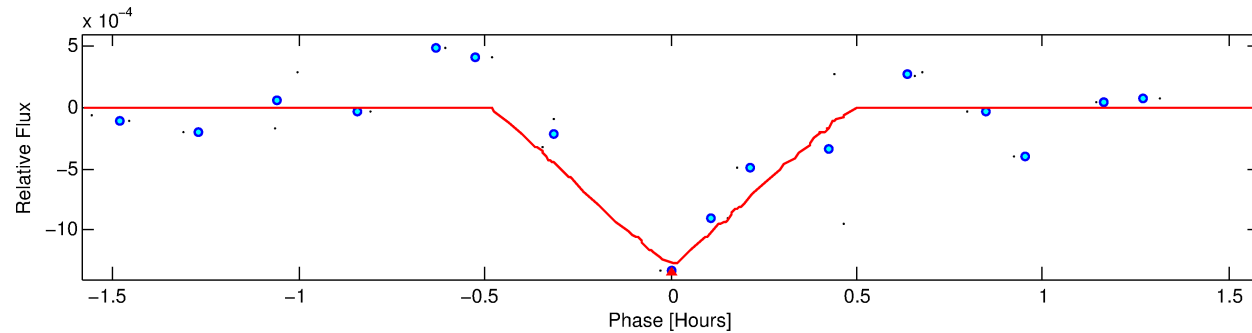
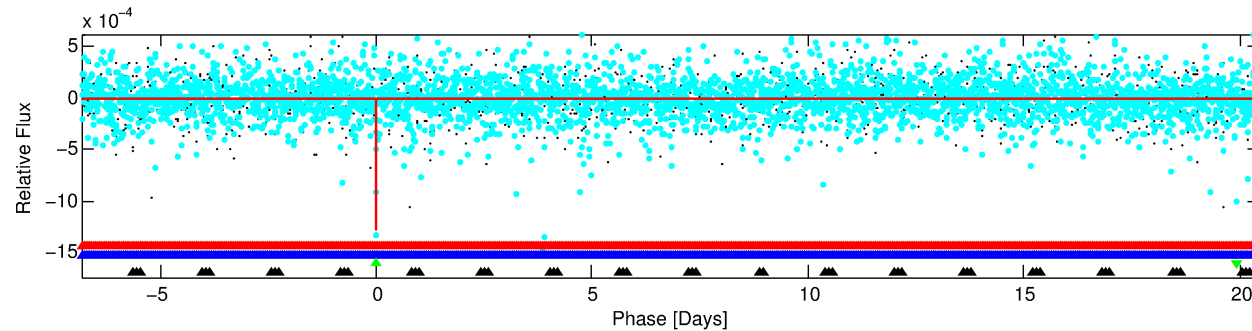
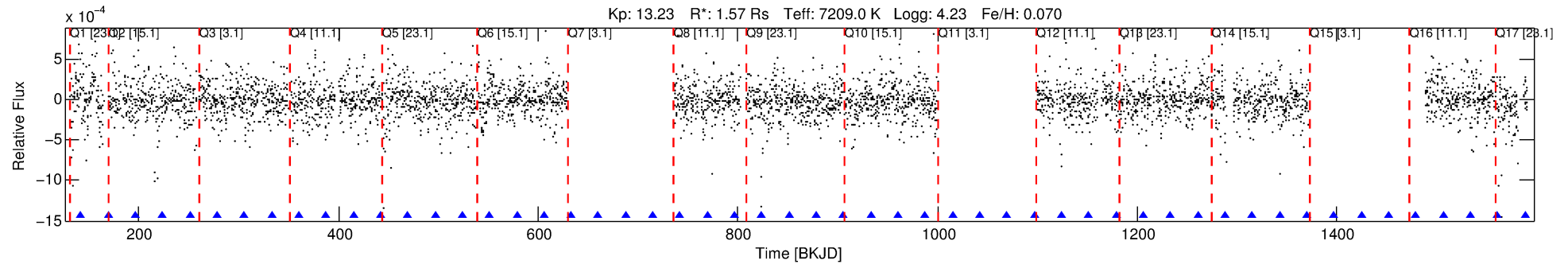
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010091792-03

No Significant Match Found

DV One-Page Summary

KIC: 10091792 Candidate: 3 of 4 Period: 27.288 d



DV Fit Results:

Period = 27.28836 [0.00012] d
Epoch = 142.0216 [0.0031] BKJD
Rp/R* = 0.0353 [0.0204]
a/R* = 355.70 [1112.70]
b = 0.51 [4.62]
Seff = 143.00 [65.69]
Teq = 882 [101] K
Rp = 6.03 [4.11] Re
a = 0.2040 [0.0596] AU
Ag = 113.56 [170.75] [0.66σ]
Teffp = 4450 [1626] K [2.19σ]

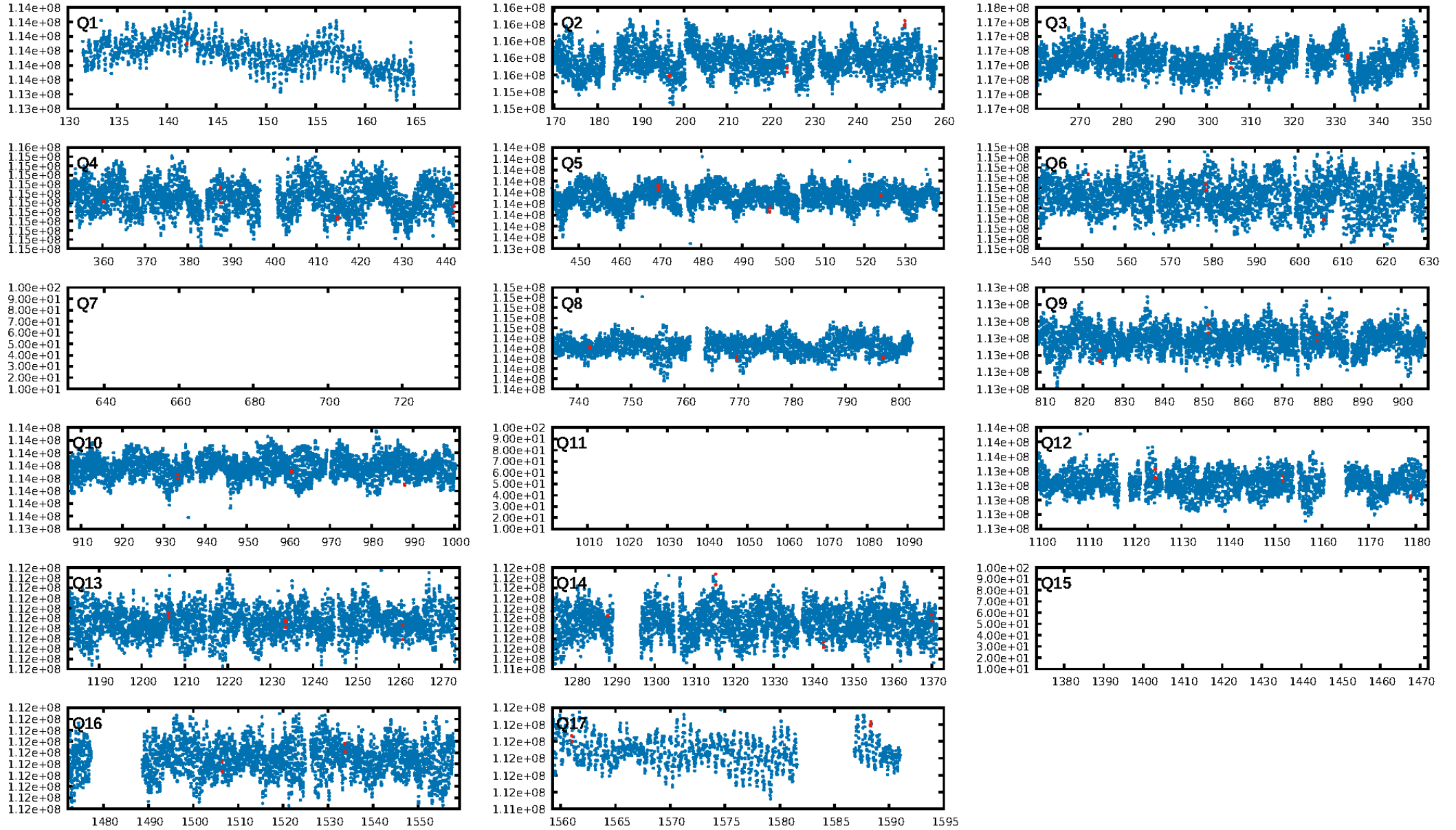
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [298.36σ]
LongPeriod-sig: 100.0% [11.45σ]
ModelChiSquare2-sig: 85.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.32e-16
RollingBand-fgt: 1.00 [12/12]
GhostDiagnostic-chr: 6.152
Centroid-sig: 38.1%
Centroid-so: 0.825 arcsec [3.00σ]
OotOffset-rm: 0.252 arcsec [0.97σ]
OotOffset-st: 4/1/3/3 [11]
KicOffset-rm: 0.447 arcsec [1.85σ]
KicOffset-st: 4/1/3/3 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 0.00 [0/12]

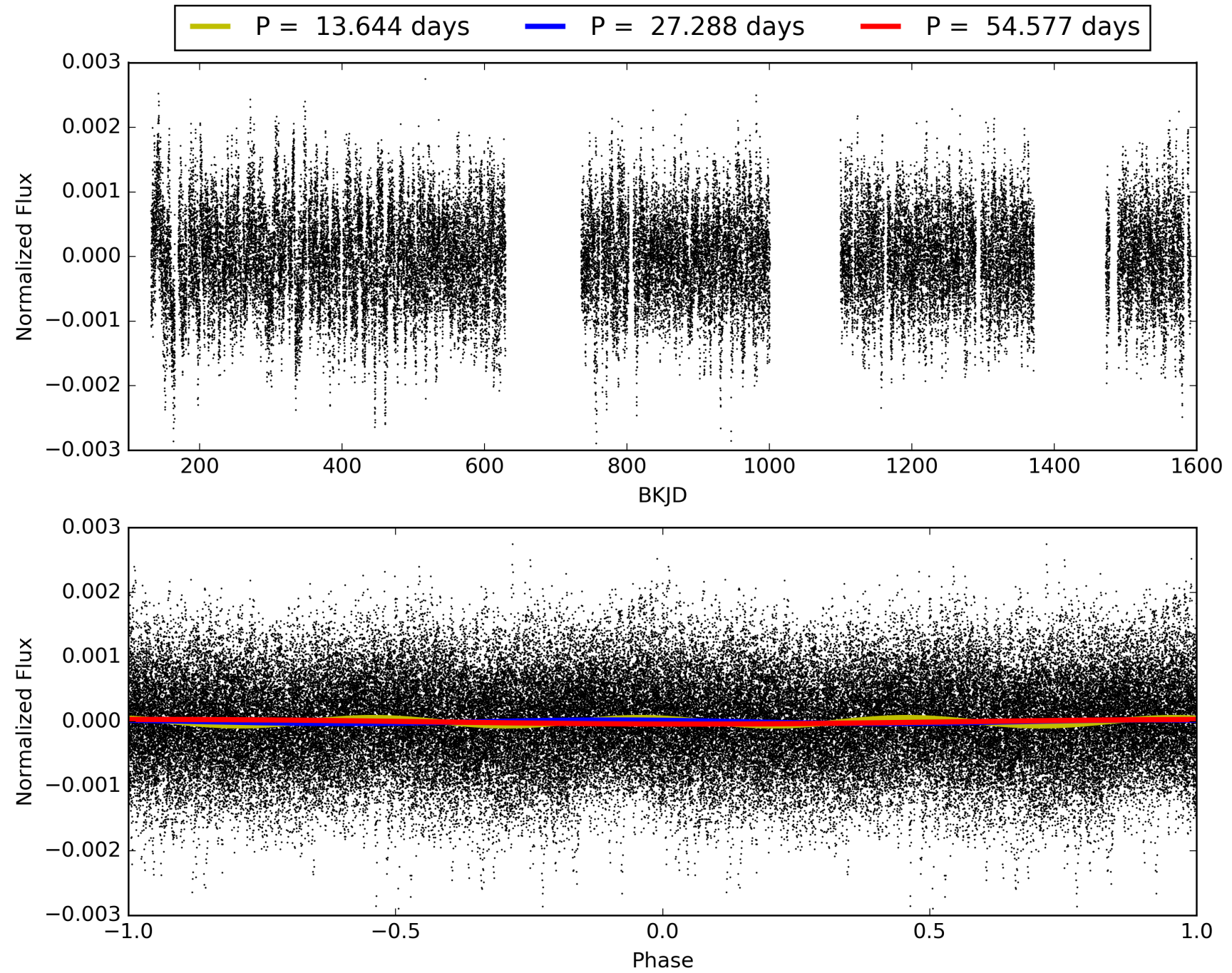
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 08:52:48 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010091792-03, PDC Light Curves

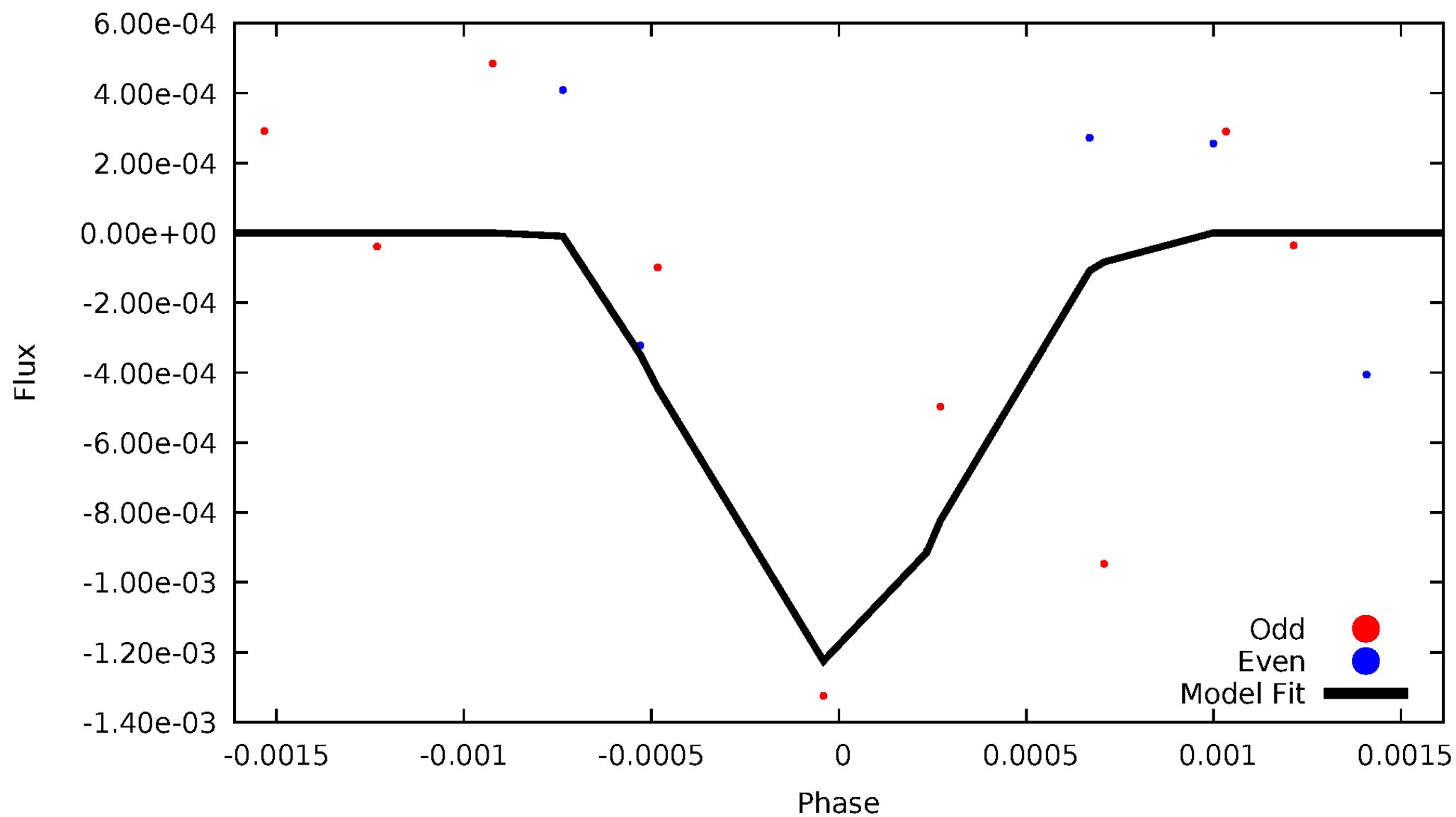


TCE 010091792-03



DV Odd/Even

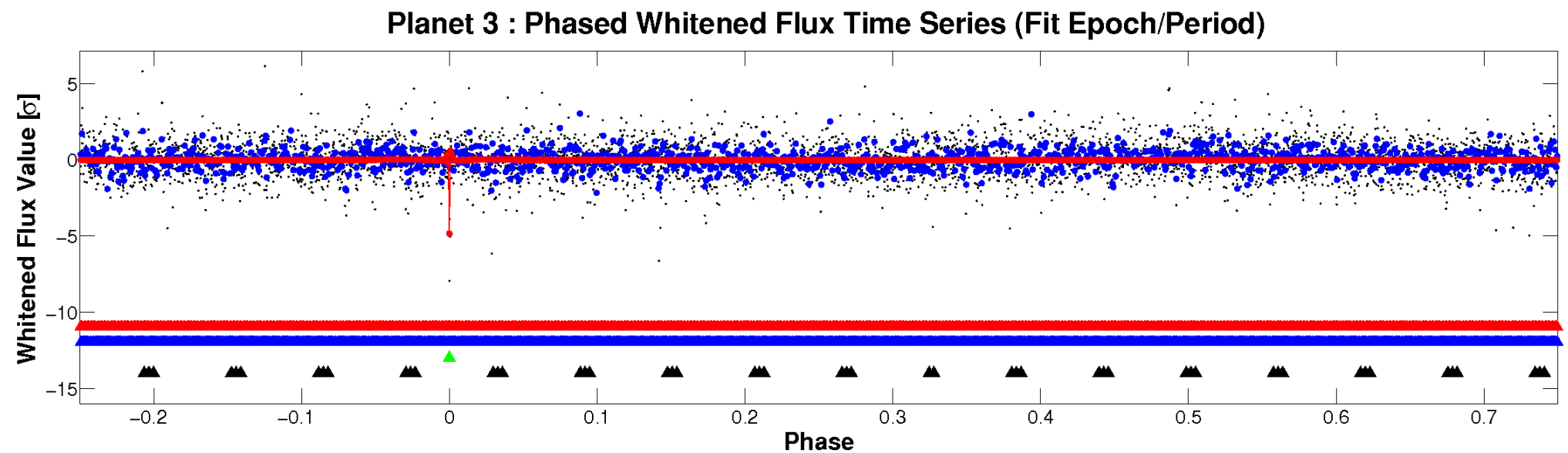
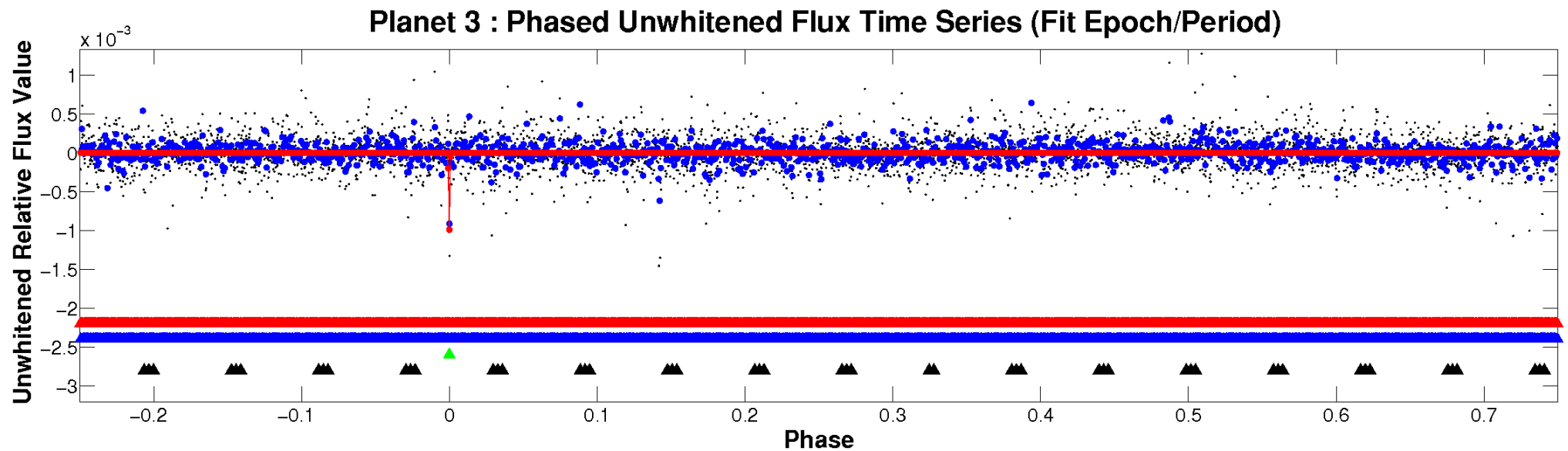
TCE 010091792-03



ALT Odd/Even

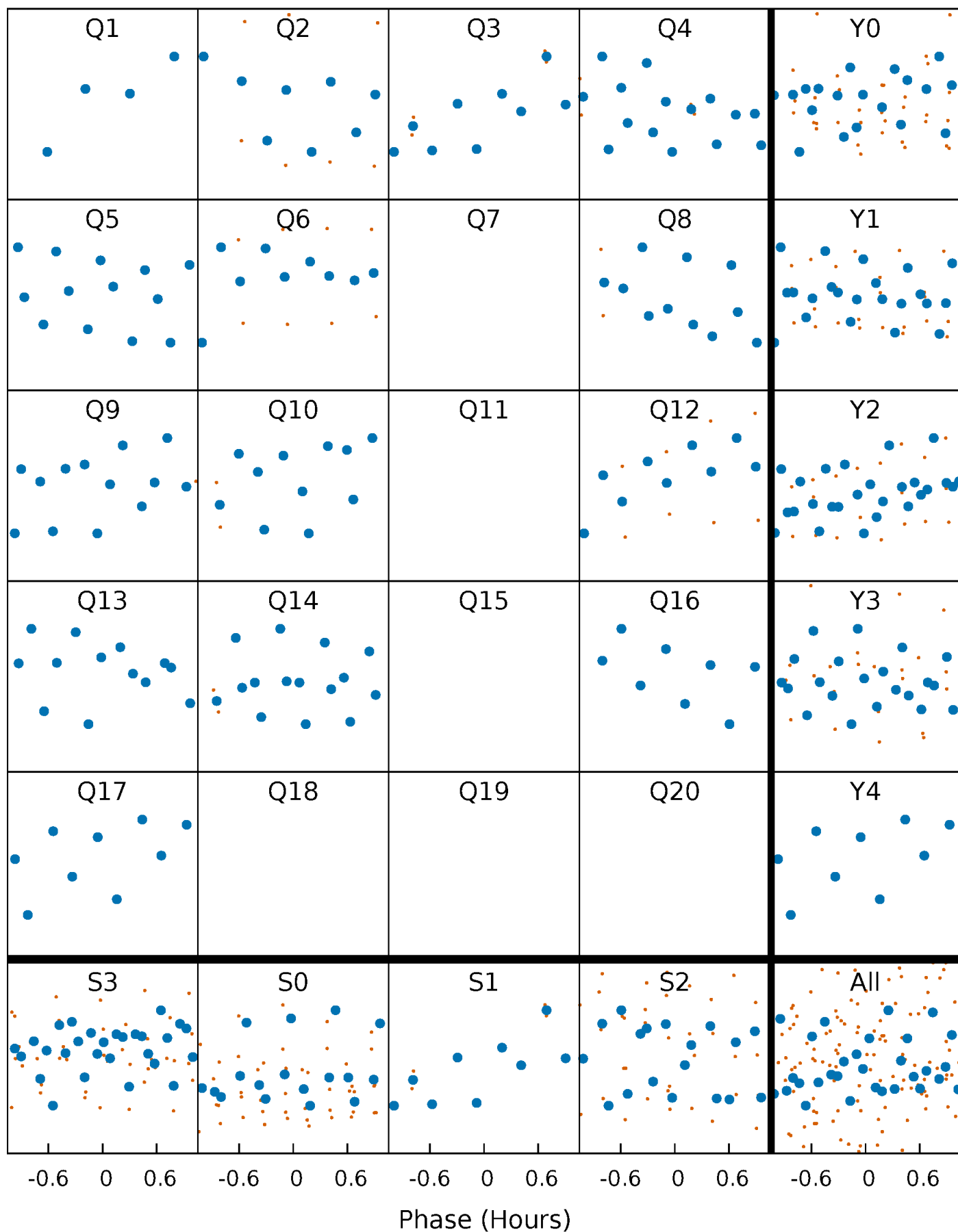
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve



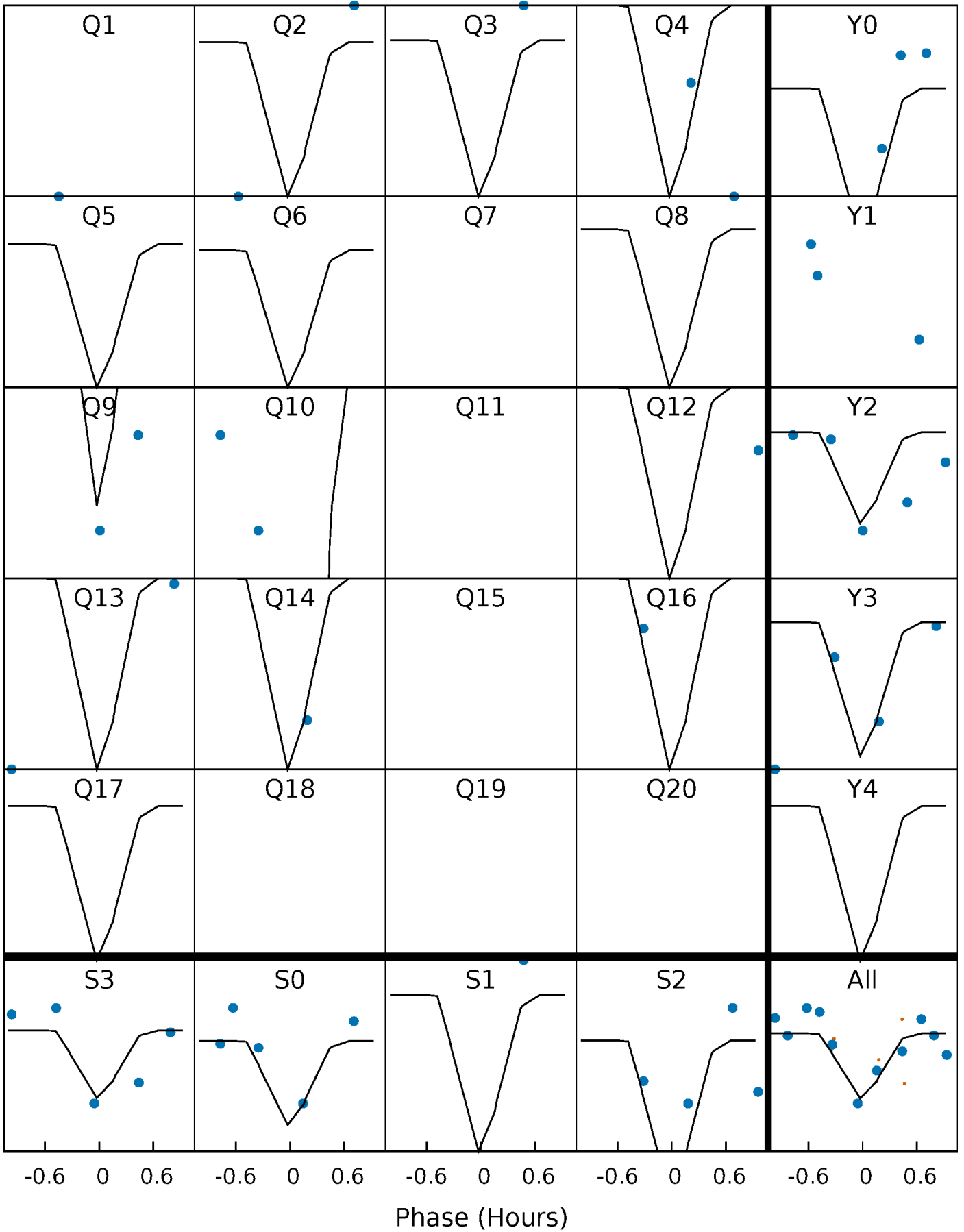
PDC Quarter-Phased Transit Curves

TCE 010091792-03 P= 27.288357 Days $T_0=142.021629$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 010091792-03 P= 27.288357 Days $T_0=142.021629$ (BKJD)

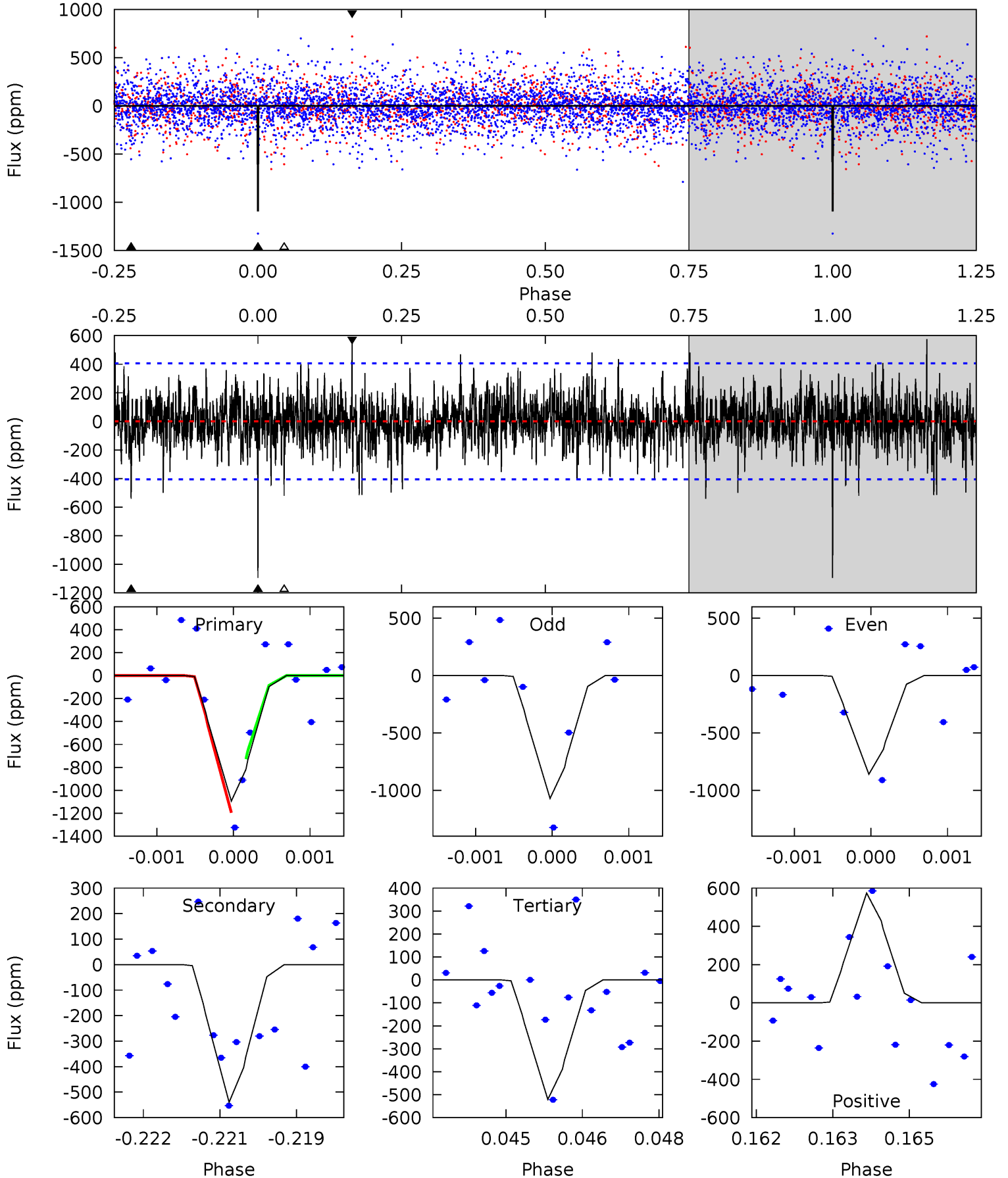


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

010091792-03, P = 27.288357 Days, E = 114.733272 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	7.16	6.91	7.62	5.39	3.19	1.75	7.61	6.90	0.25	-0.46	1.46	1.00	0.34	3.14



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 010091792

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7209^{+228}_{-371}	$4.229^{+0.072}_{-0.217}$	$0.070^{+0.200}_{-0.350}$	$1.568^{+0.565}_{-0.242}$	$1.517^{+0.233}_{-0.211}$	$0.555^{+0.234}_{-0.314}$
	+3%/-5%	+2%/-5%	+286%/-500%	+36%/-15%	+15%/-14%	+42%/-57%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010091792-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-540 ± 75	$6.45^{+4.01}_{-3.10}$	1253^{+102}_{-83}	5670^{+2429}_{-949}	283^{+767}_{-169}
Alt.	N/A	N/A	N/A	N/A	N/A

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

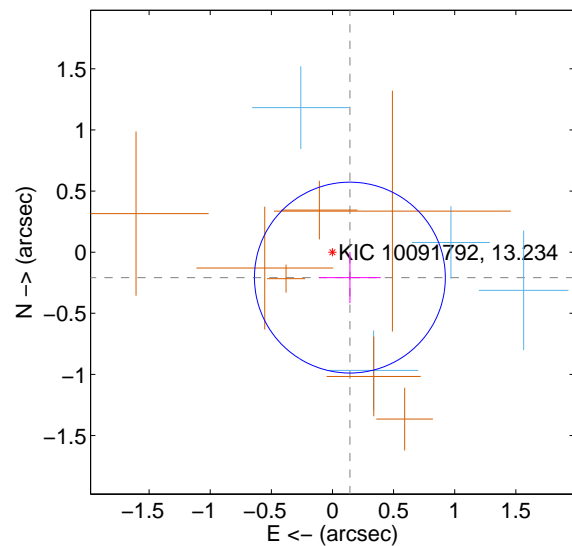
Supplemental centroid analysis for 010091792-03. Kepler magnitude: 13.23. Transit SNR 9.26

There are 4 quarters with good PRF difference image offsets

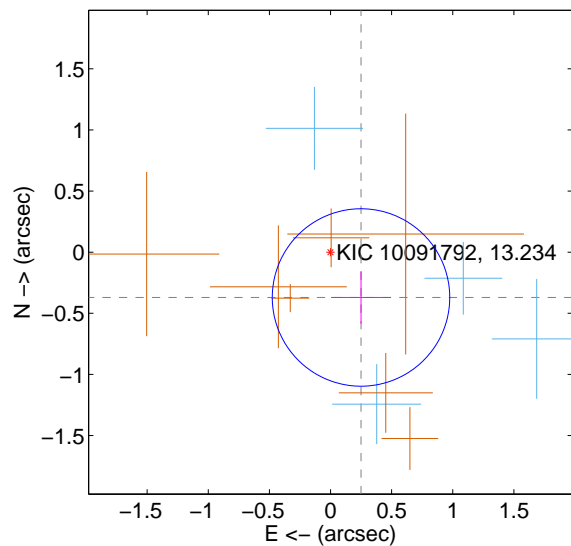
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.252 ± 0.260	0.97	-0.143 ± 0.252	-0.208 ± 0.208
PRF-fit source offset from KIC position	0.447 ± 0.242	1.85	-0.249 ± 0.246	-0.371 ± 0.214
photometric centroid source offset	0.82 ± 0.27	3.00	0.11 ± 0.25	-0.82 ± 0.28

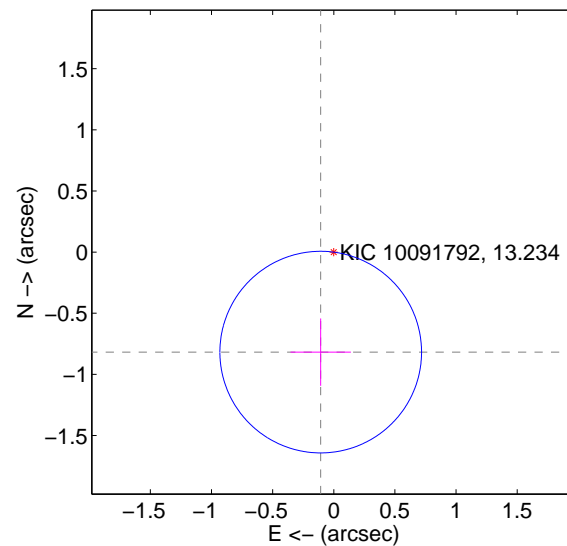
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

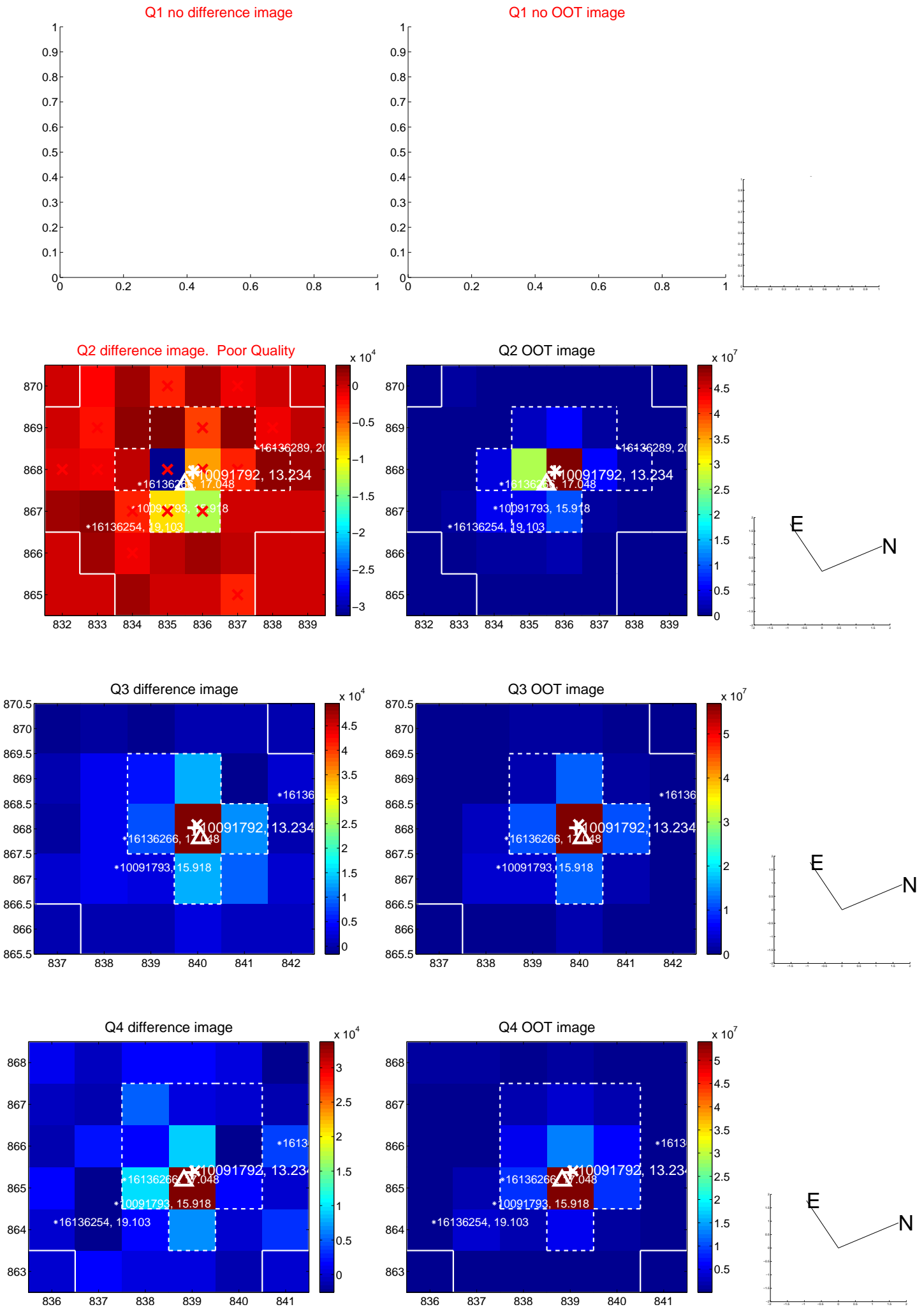


offset from photometric centroids

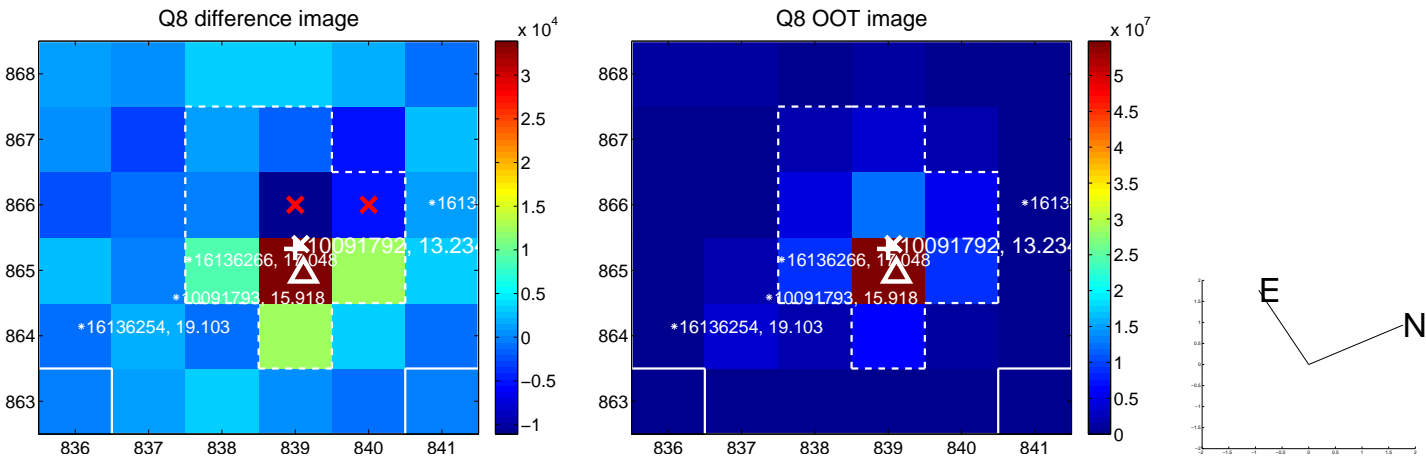
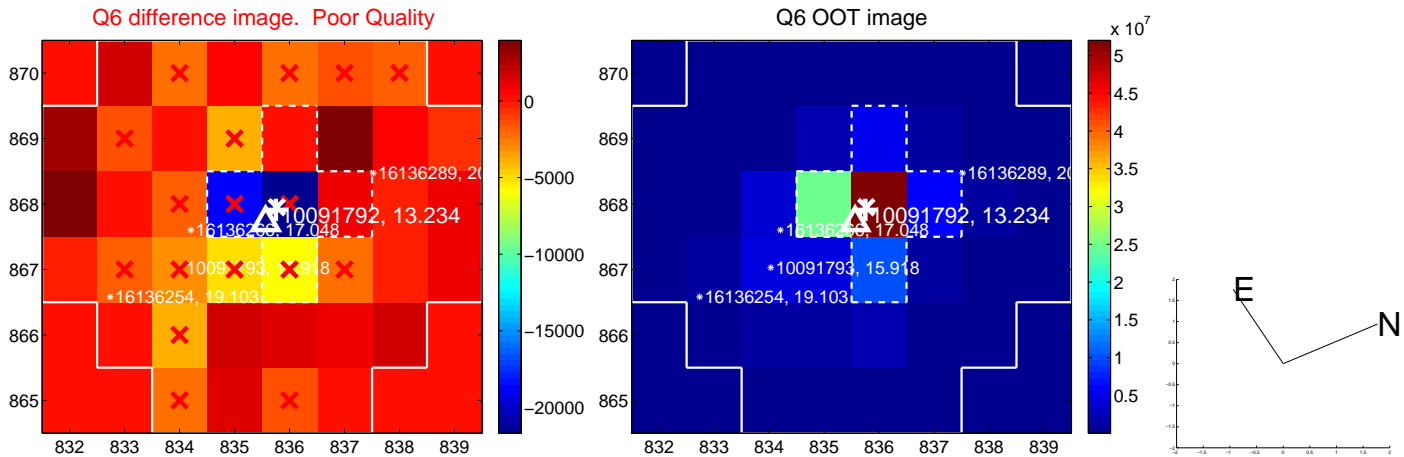
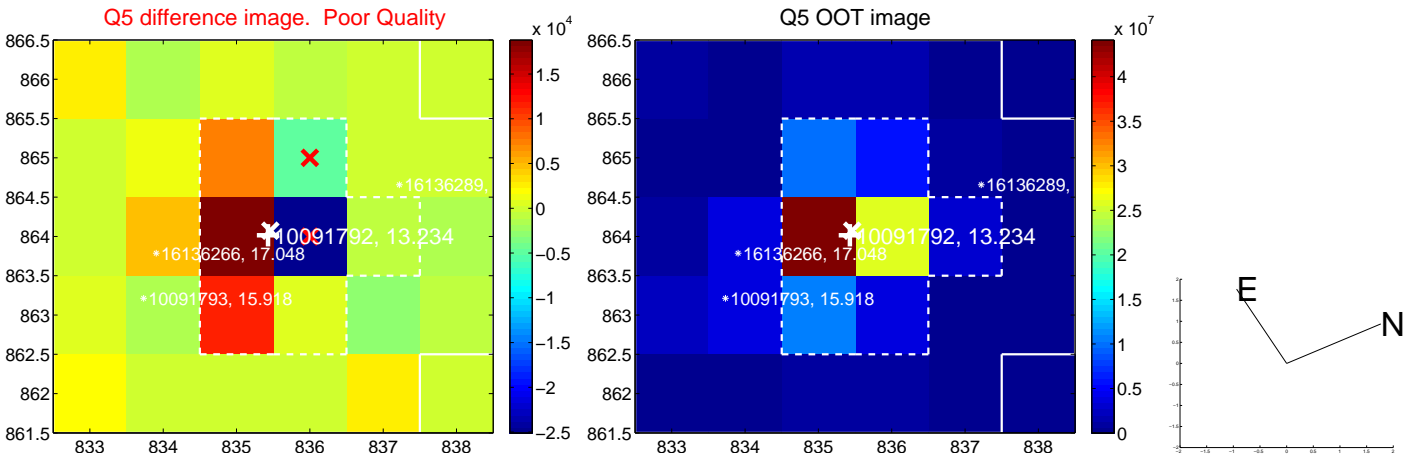


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

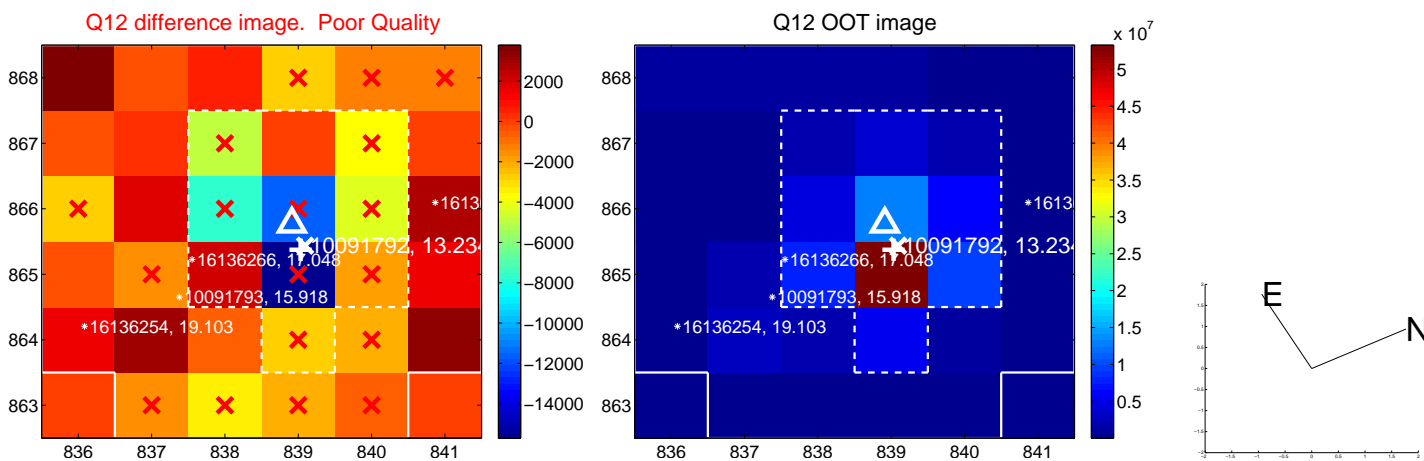
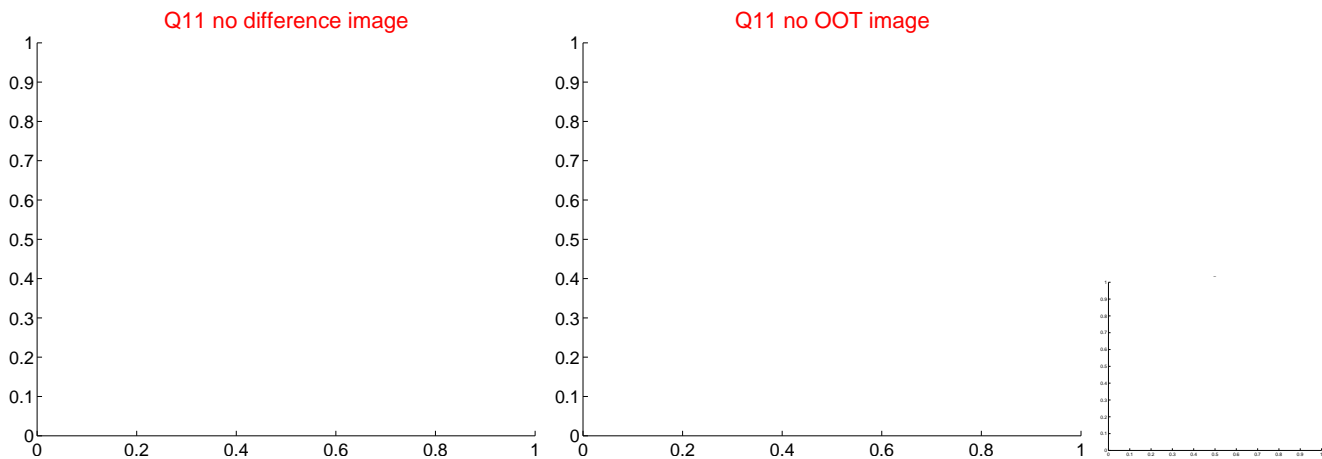
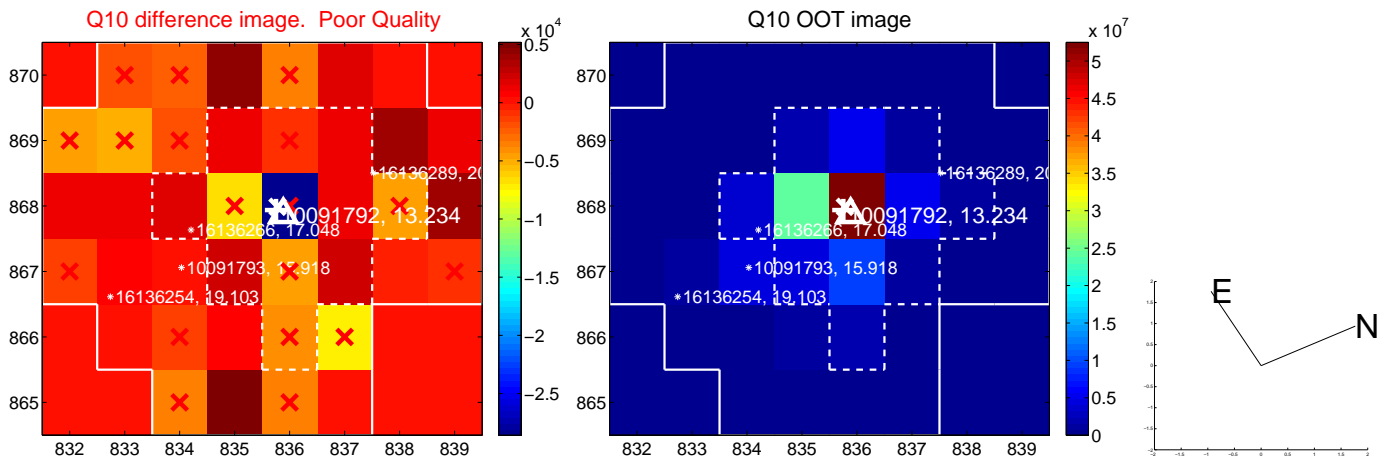
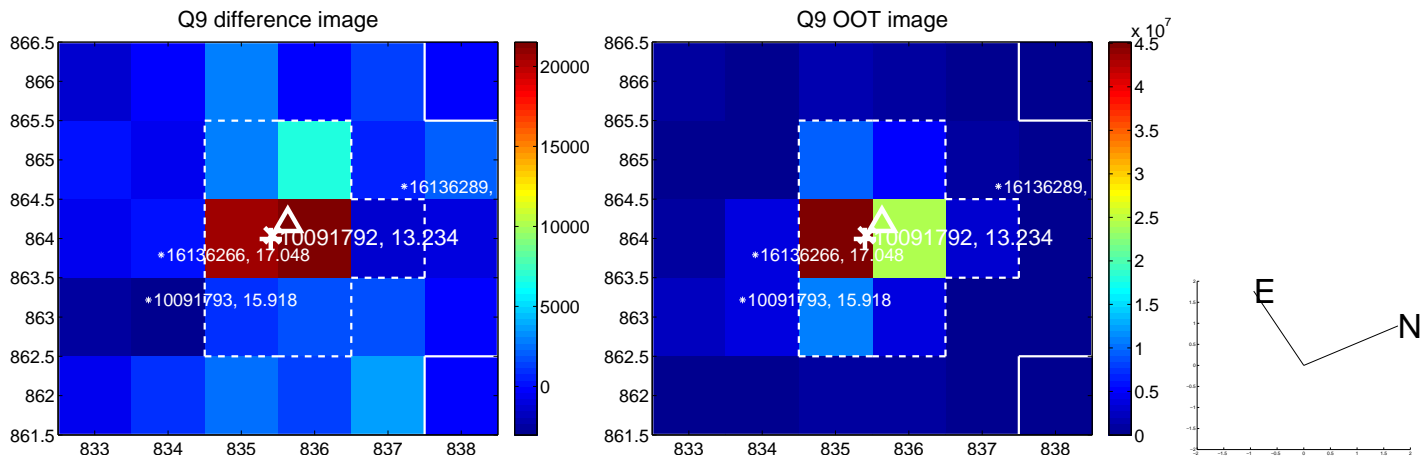
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



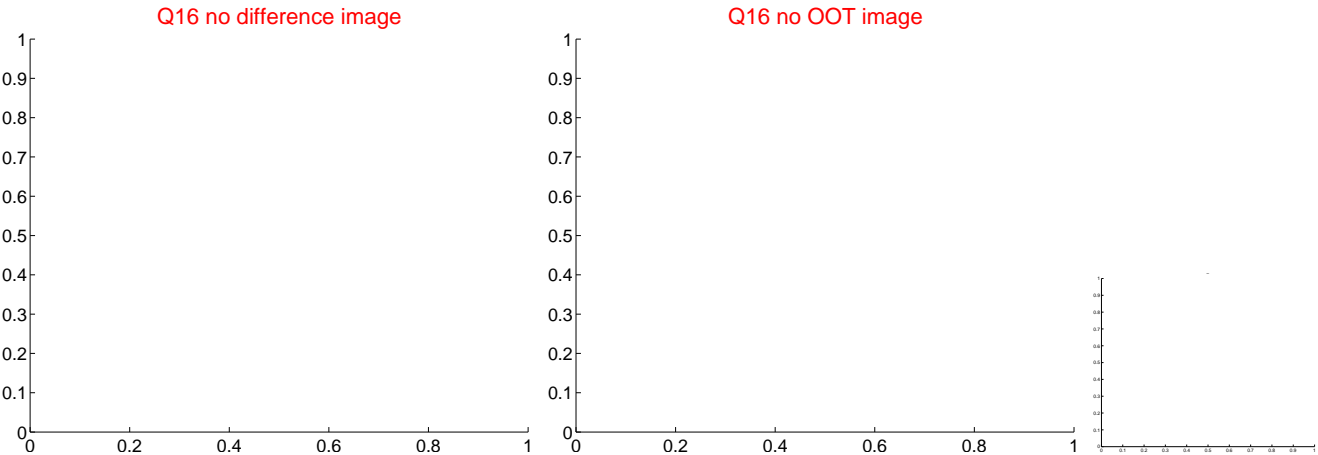
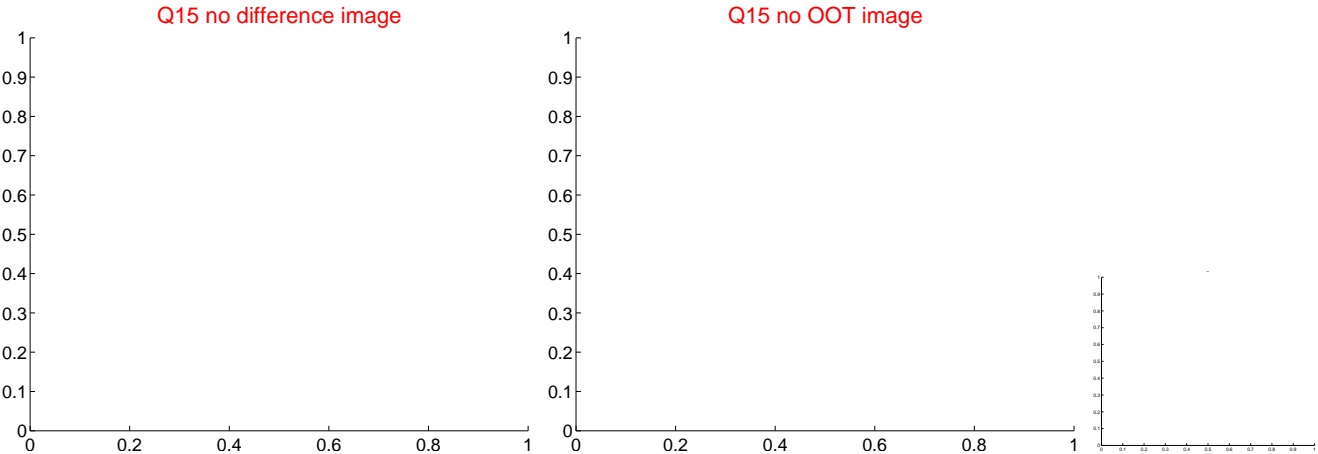
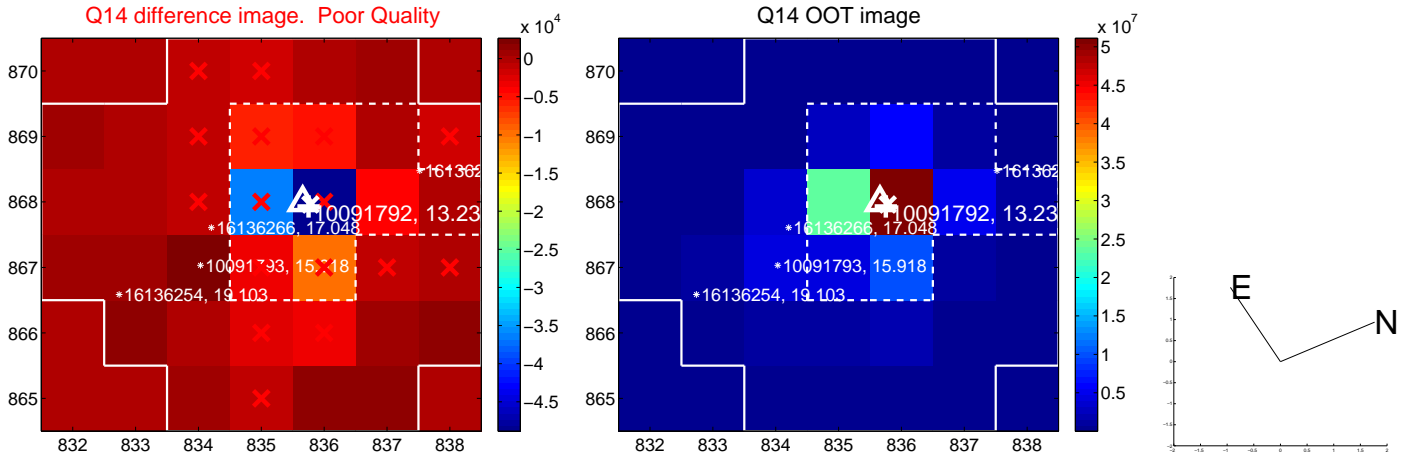
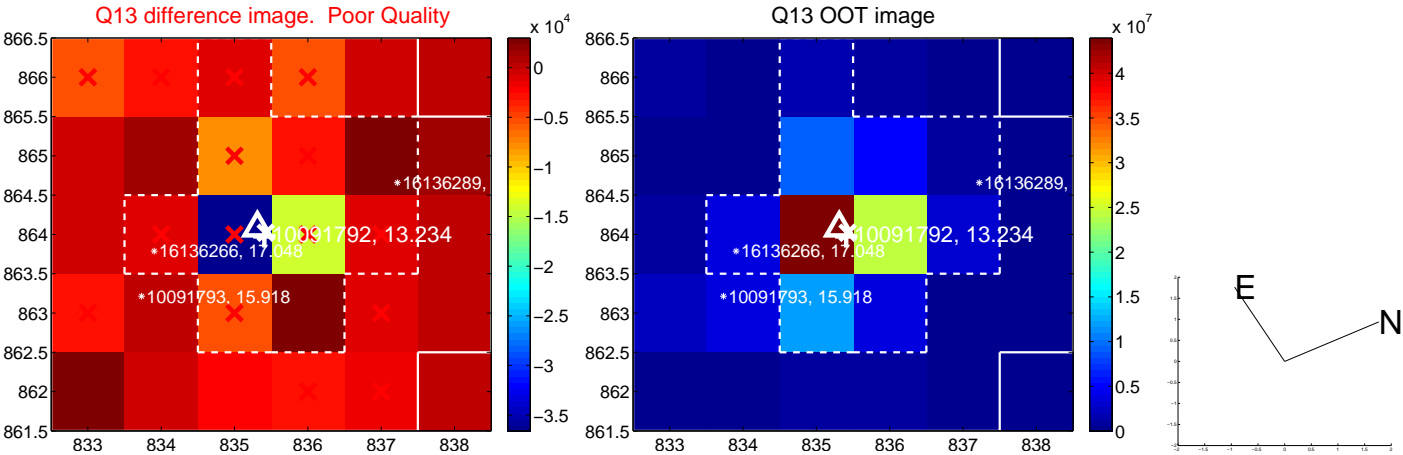
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



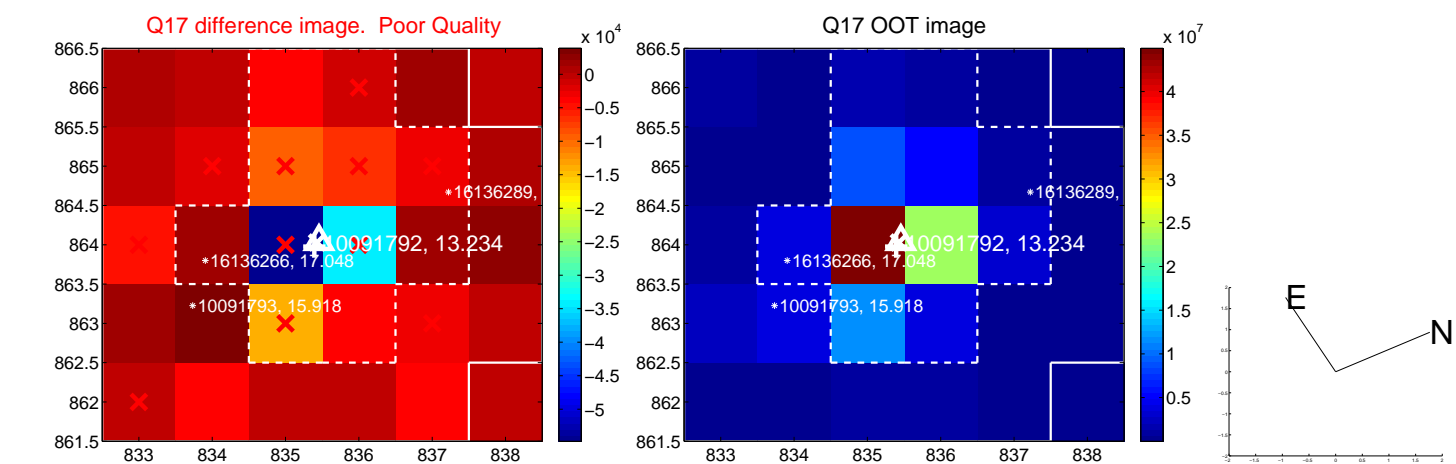
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



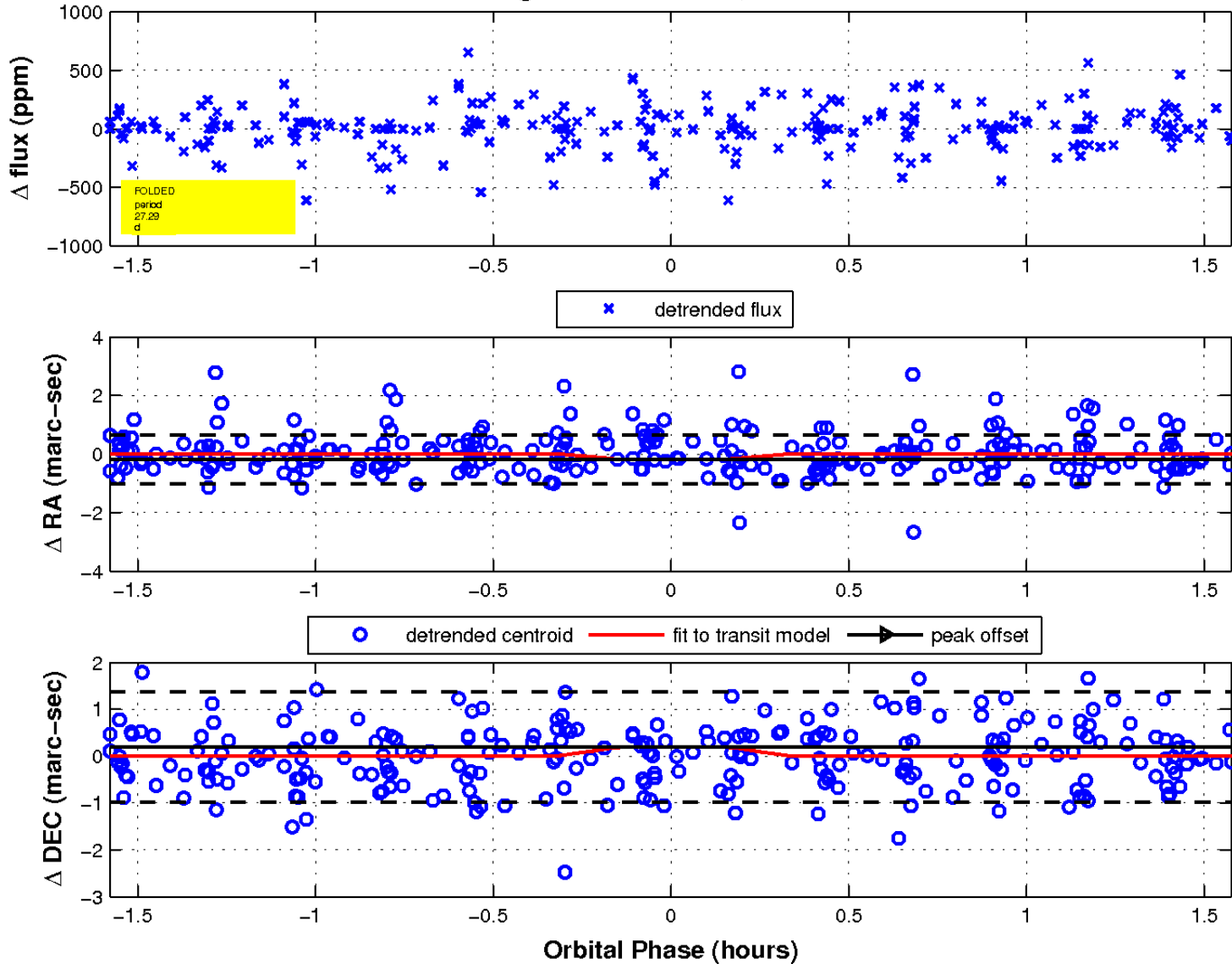
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

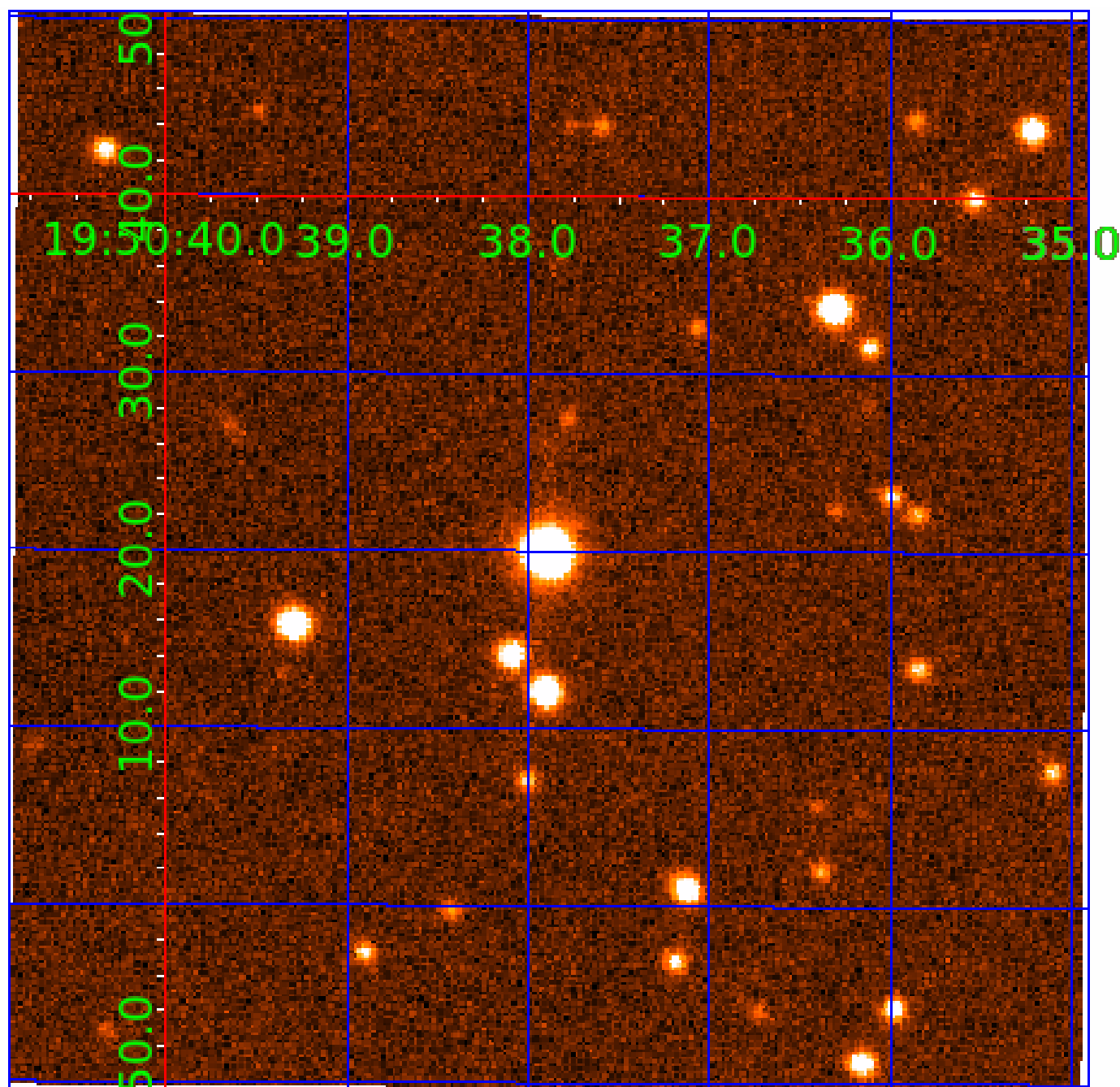


fluxWeightedCentroids, Planet 3 of 4



UKIRT Image

Declination



KIC 010091792

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
010091792-01	OBS	No	0.615403	131.760962	59.7	2.080	11.1	12.5	1.57	7209	1.41	22442.92
010091792-02	OBS	No	0.615400	132.076789	57.0	2.067	9.6	11.5	1.57	7209	1.37	22443.02
010091792-03	OBS	No	27.288357	142.021630	1269.0	0.528	9.3	9.3	1.57	7209	6.03	143.00
010091792-04	OBS	No	28.898581	152.405754	810.1	3.332	7.9	6.9	1.57	7209	4.54	132.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010091792-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
010091792-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
010091792-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV
010091792-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_TER_ALT—MOD_POS_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

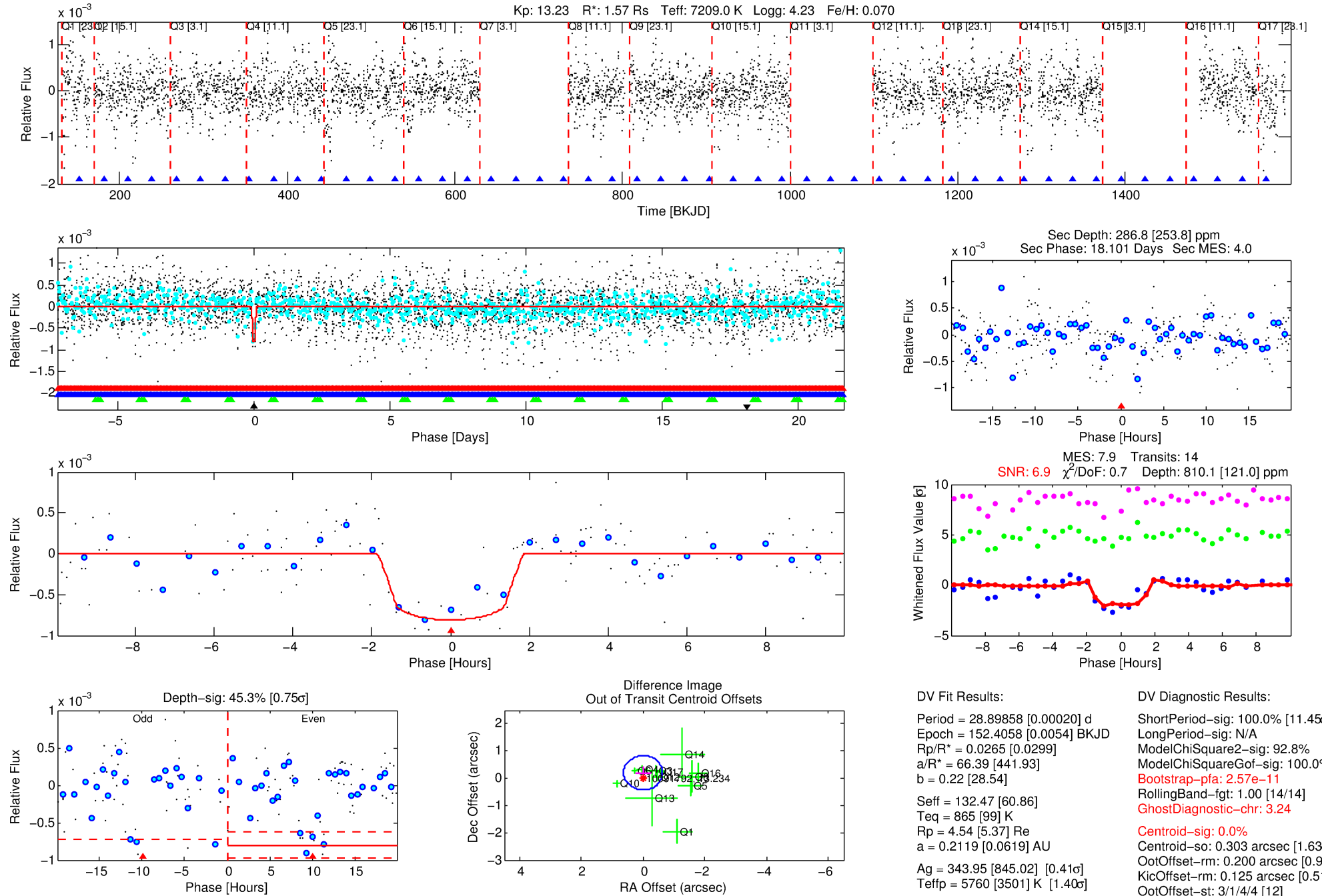
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010091792-04

No Significant Match Found

DV One-Page Summary

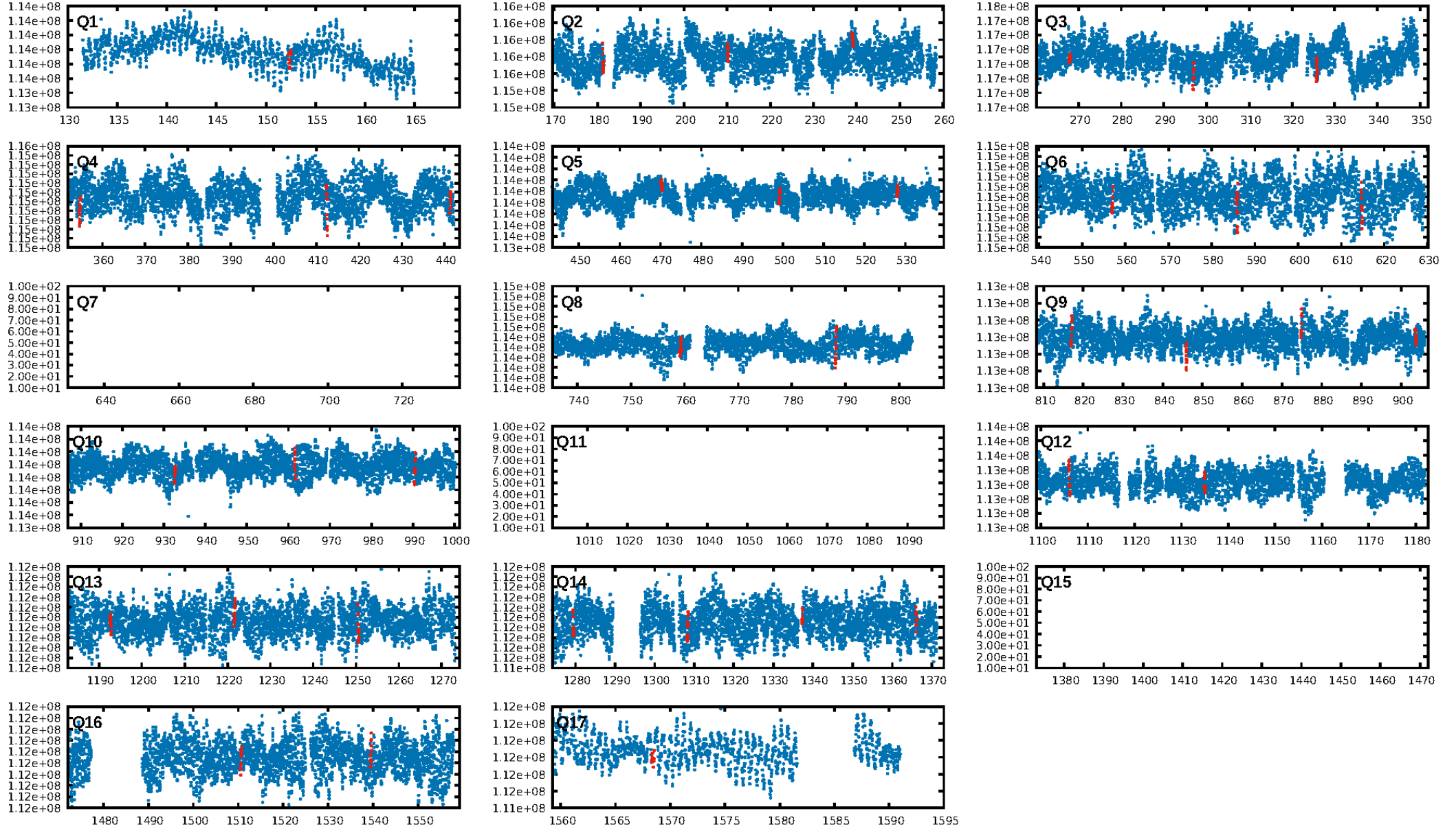
KIC: 10091792 Candidate: 4 of 4 Period: 28.899 d



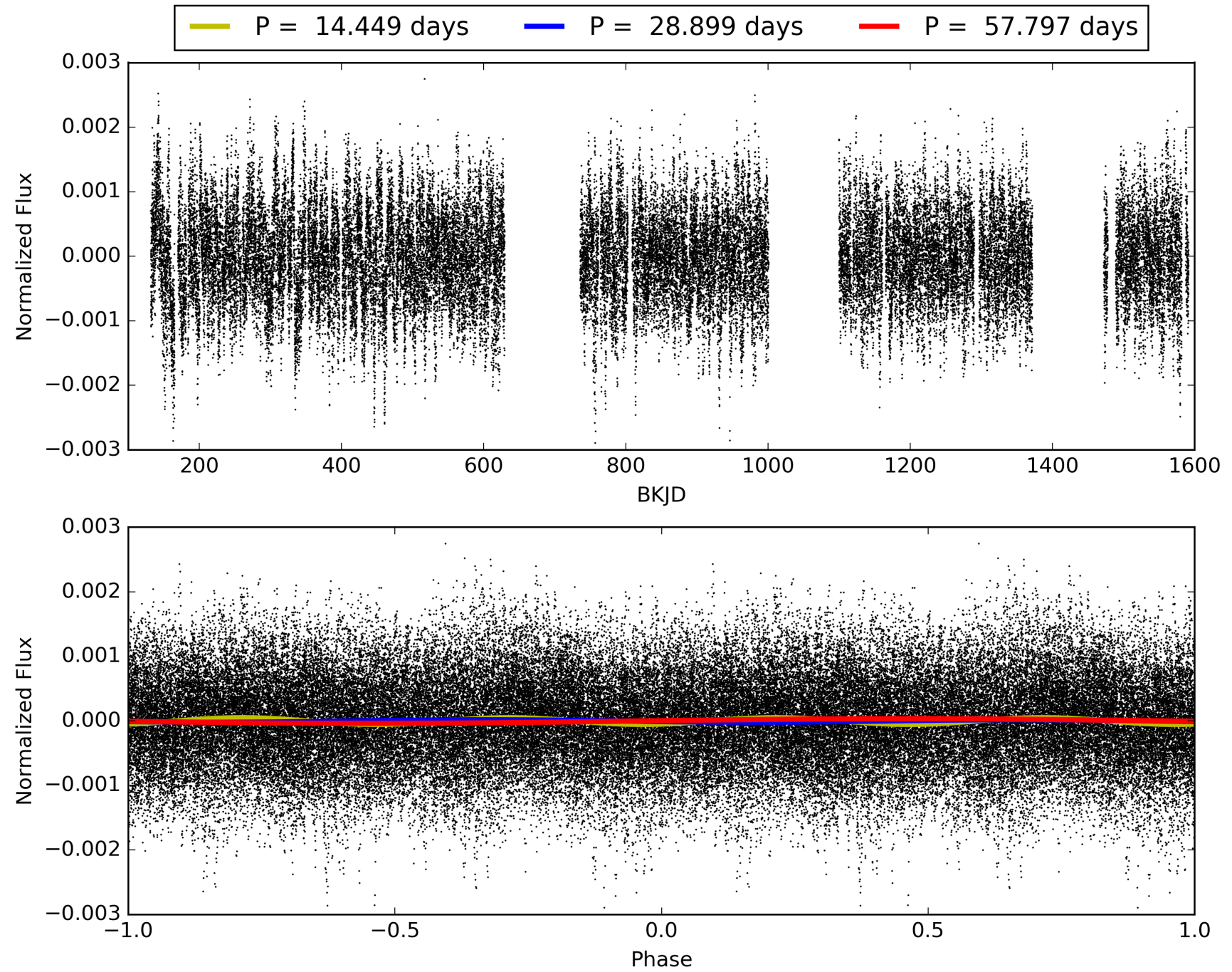
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 08:52:51 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010091792-04, PDC Light Curves

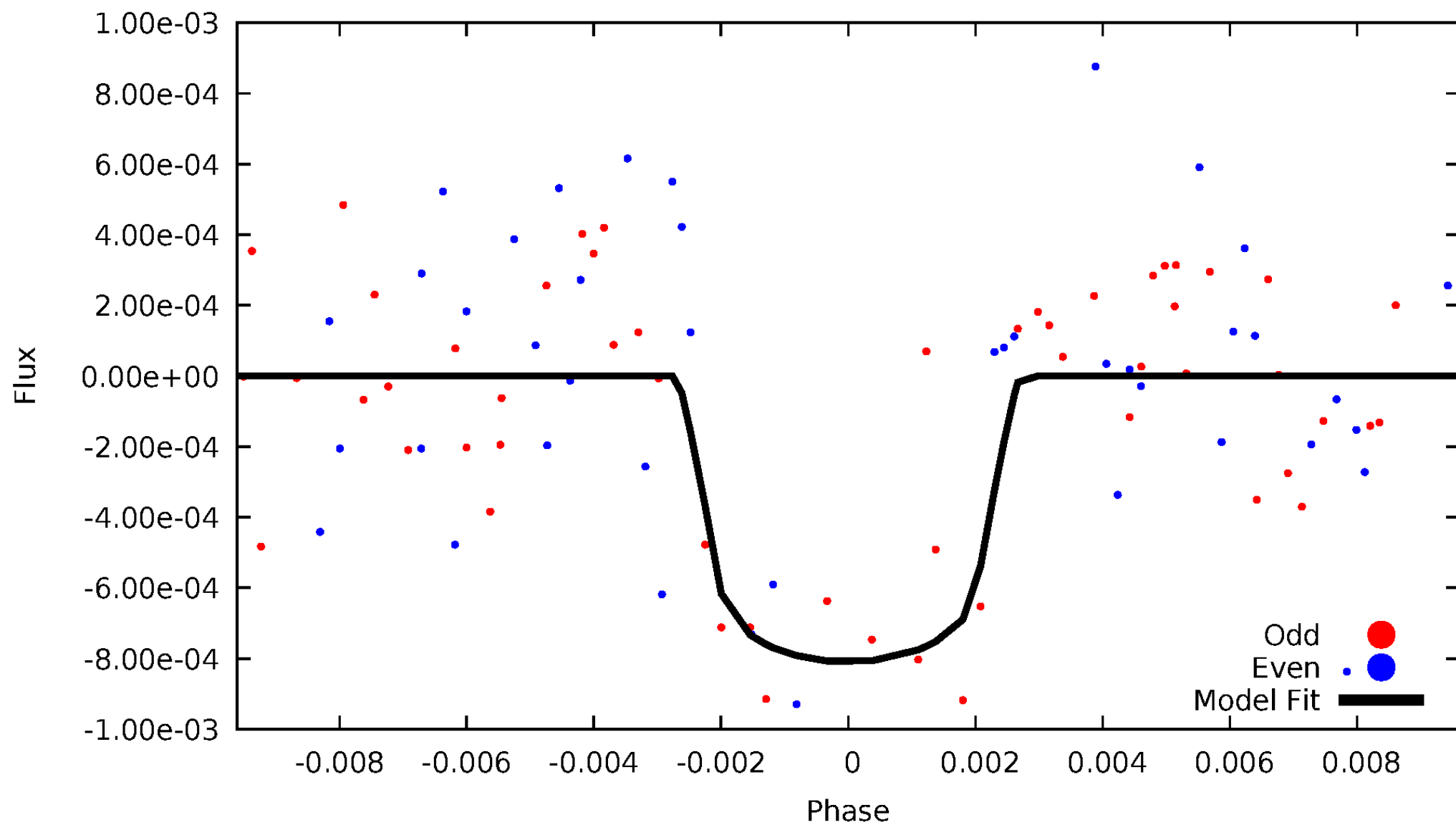


TCE 010091792-04



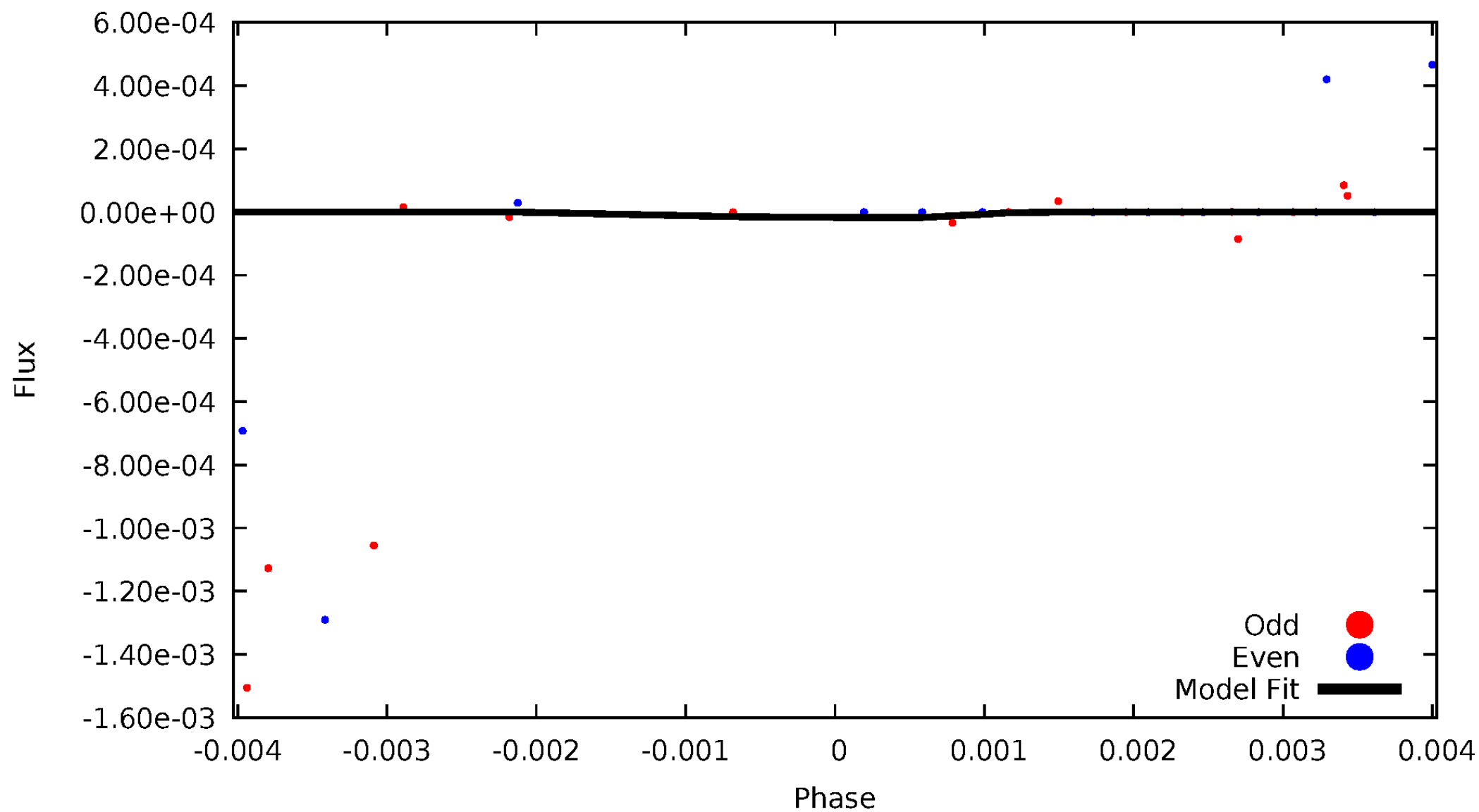
DV Odd/Even

TCE 010091792-04



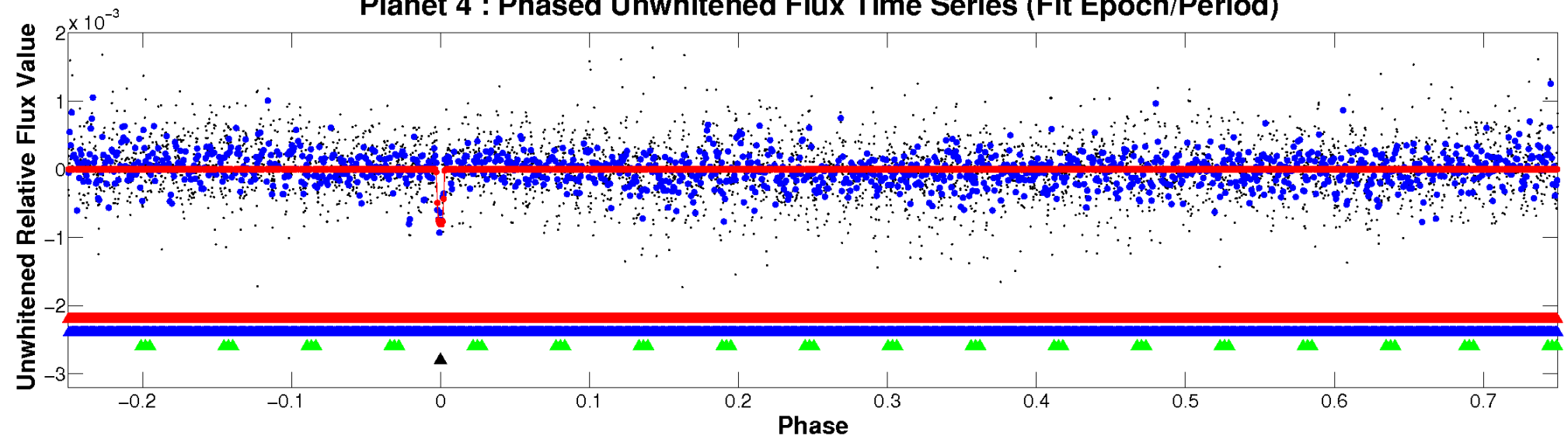
ALT Odd/Even

TCE 010091792-04

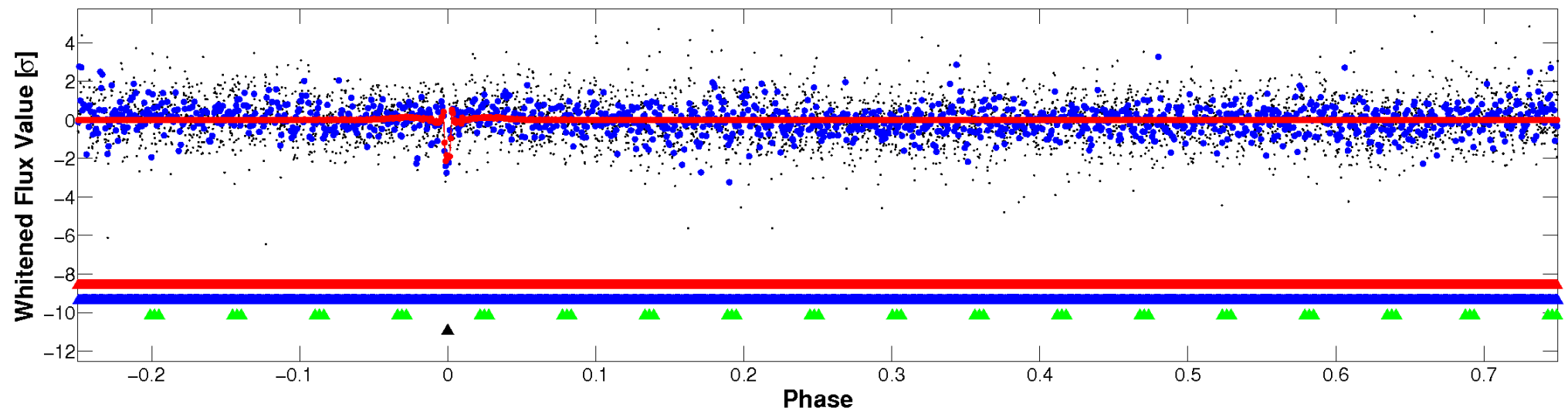


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

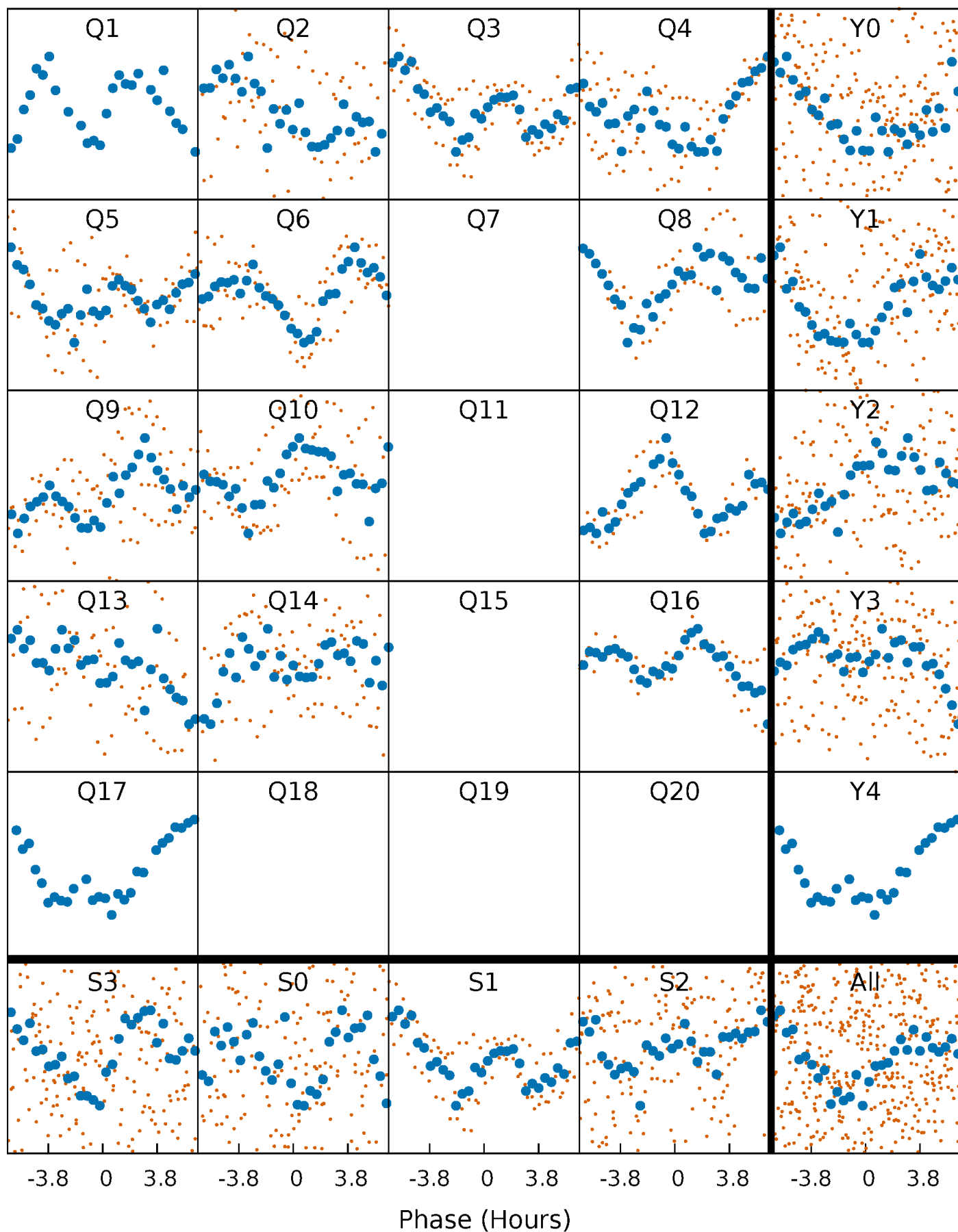


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



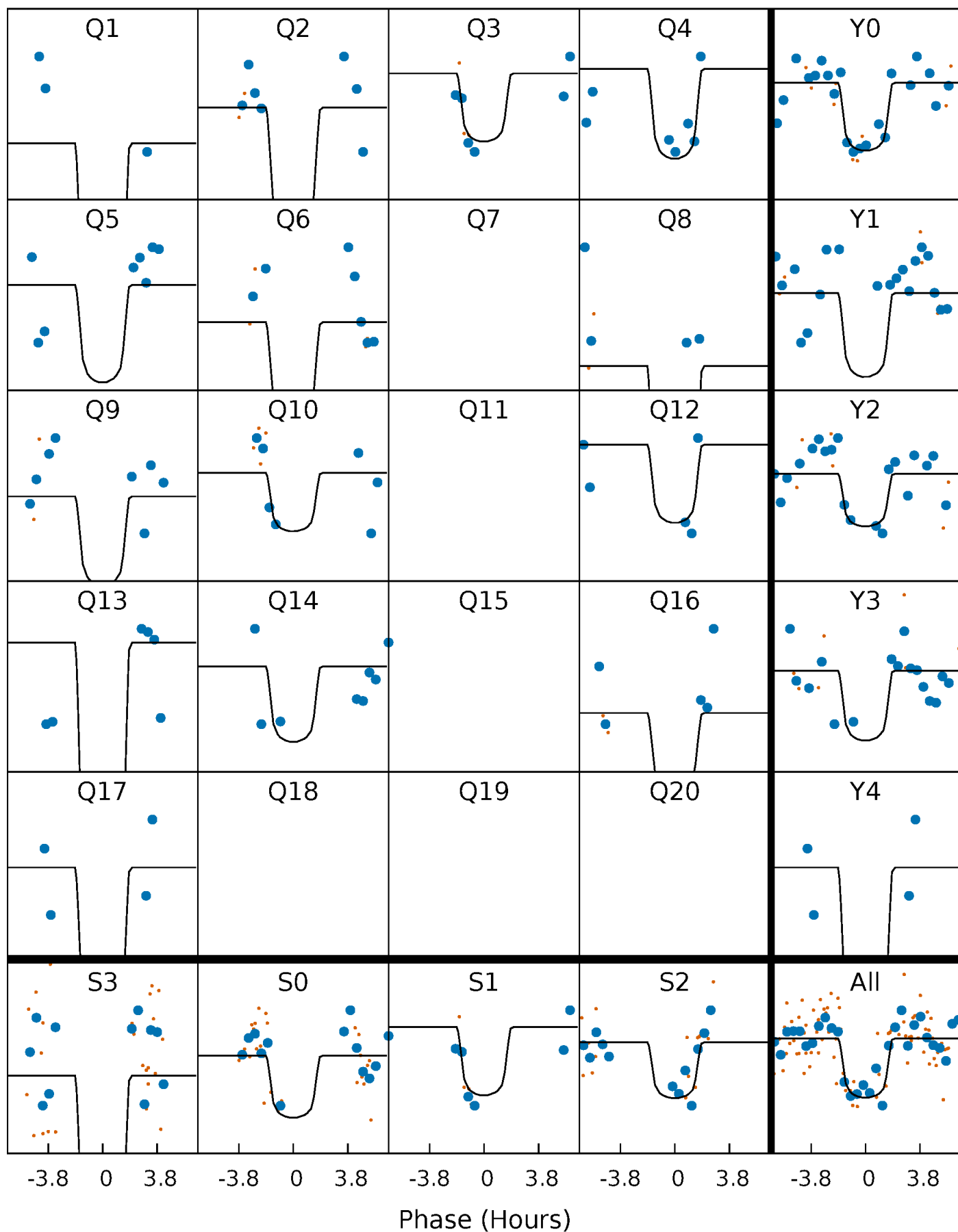
PDC Quarter-Phased Transit Curves

TCE 010091792-04 P= 28.898581 Days $T_0=152.405754$ (BKJD)



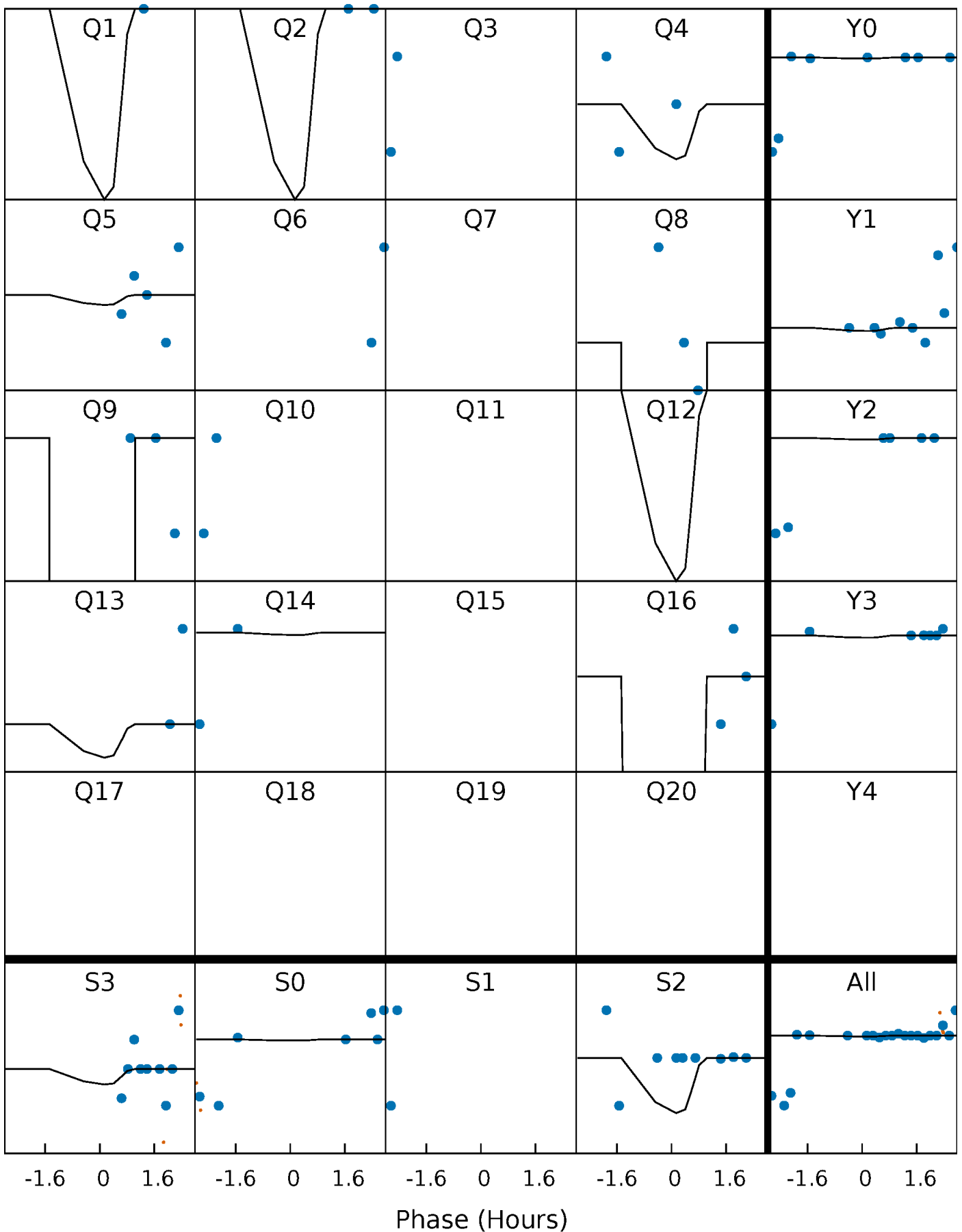
DV Quarter-Phased Transit Curves

TCE 010091792-04 P= 28.898581 Days $T_0=152.405754$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

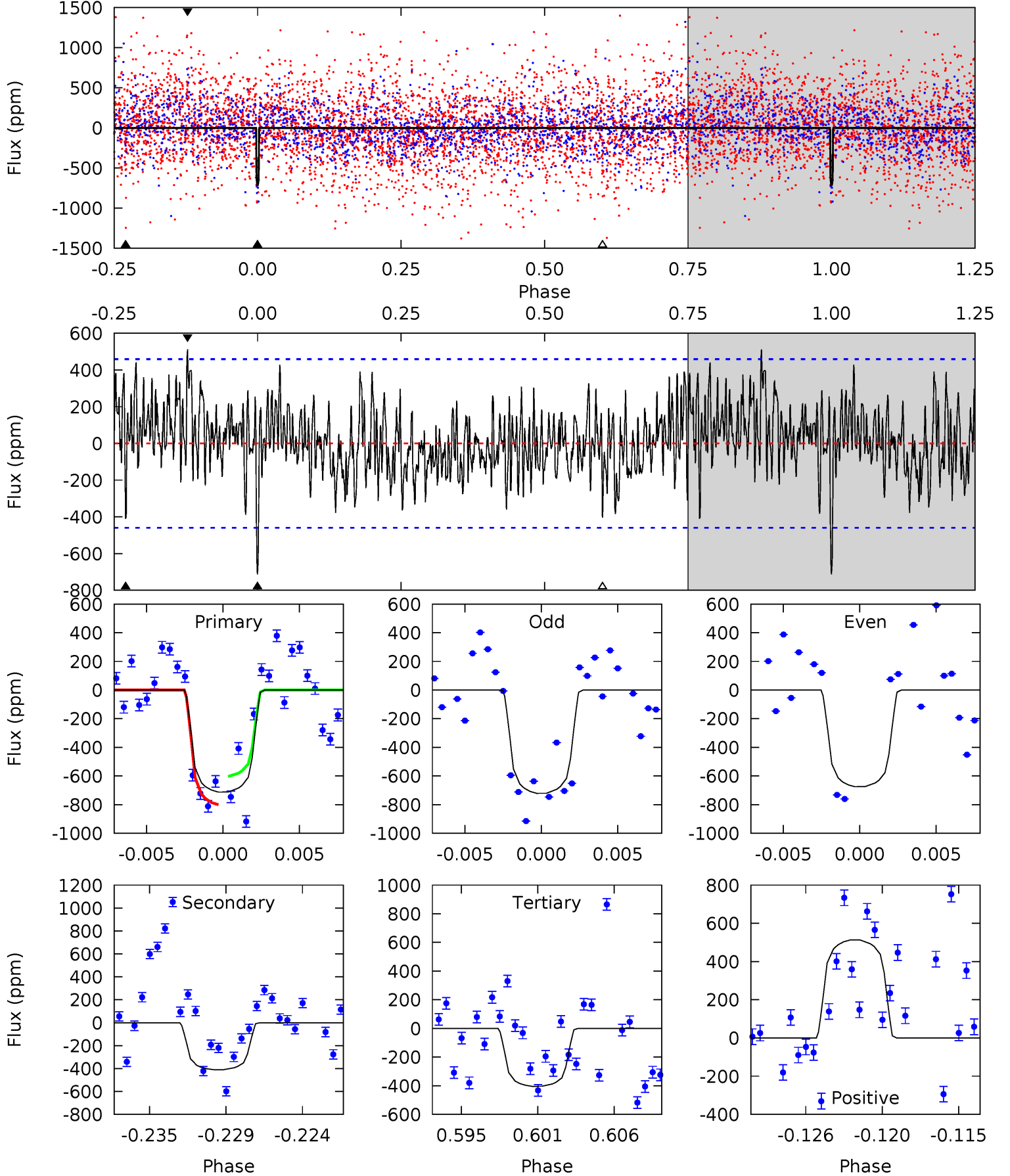
TCE 010091792-04 P= 28.897253 Days $T_0=152.488838$ (BKJD)



DV Model-Shift Uniqueness Test

010091792-04, P = 28.898581 Days, E = 123.507173 Days

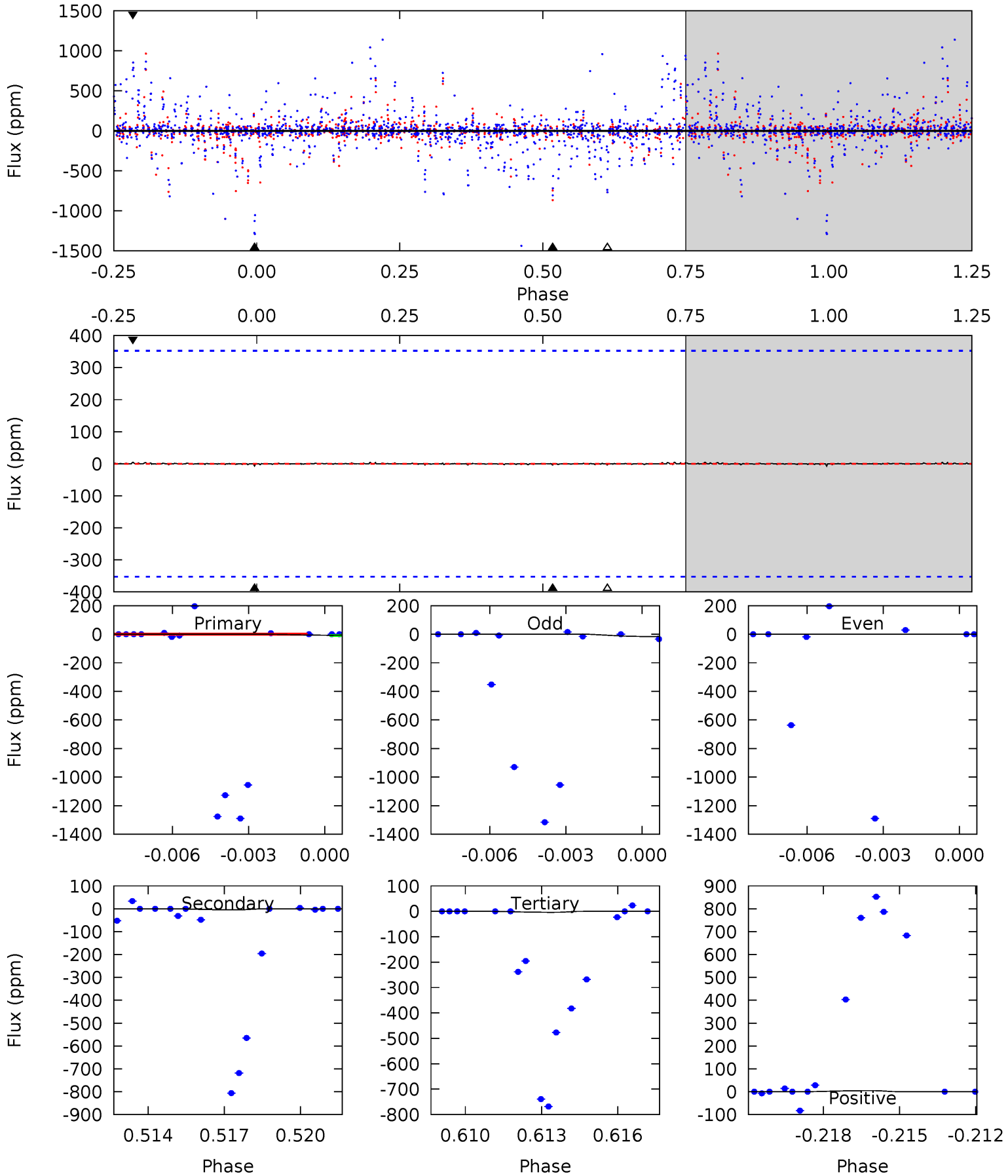
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.98	4.59	4.52	5.74	5.14	2.78	1.70	3.45	2.23	0.07	-1.15	0.24	0.97	0.42	1.11



Alt Model-Shift Uniqueness Test

010091792-04, P = 28.897253 Days, E = 123.591585 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.11	0.07	0.06	0.07	5.25	2.97	0.01	0.05	0.04	0.01	-0.00	0	0	0.40	0



Stellar Parameters For KIC 010091792

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7209^{+228}_{-371}	$4.229^{+0.072}_{-0.217}$	$0.070^{+0.200}_{-0.350}$	$1.568^{+0.565}_{-0.242}$	$1.517^{+0.233}_{-0.211}$	$0.555^{+0.234}_{-0.314}$
	+3%/-5%	+2%/-5%	+286%/-500%	+36%/-15%	+15%/-14%	+42%/-57%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010091792-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-410 ± 89	$6.32^{+4.66}_{-4.10}$	1234^{+94}_{-81}	5506^{+4614}_{-1203}	263^{+1804}_{-186}
Alt.	-5 ± 67	$3.97^{+4.12}_{-2.70}$	1233^{+100}_{-79}	2651^{+2679}_{-7453}	$3.425^{+233.383}_{-155.033}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

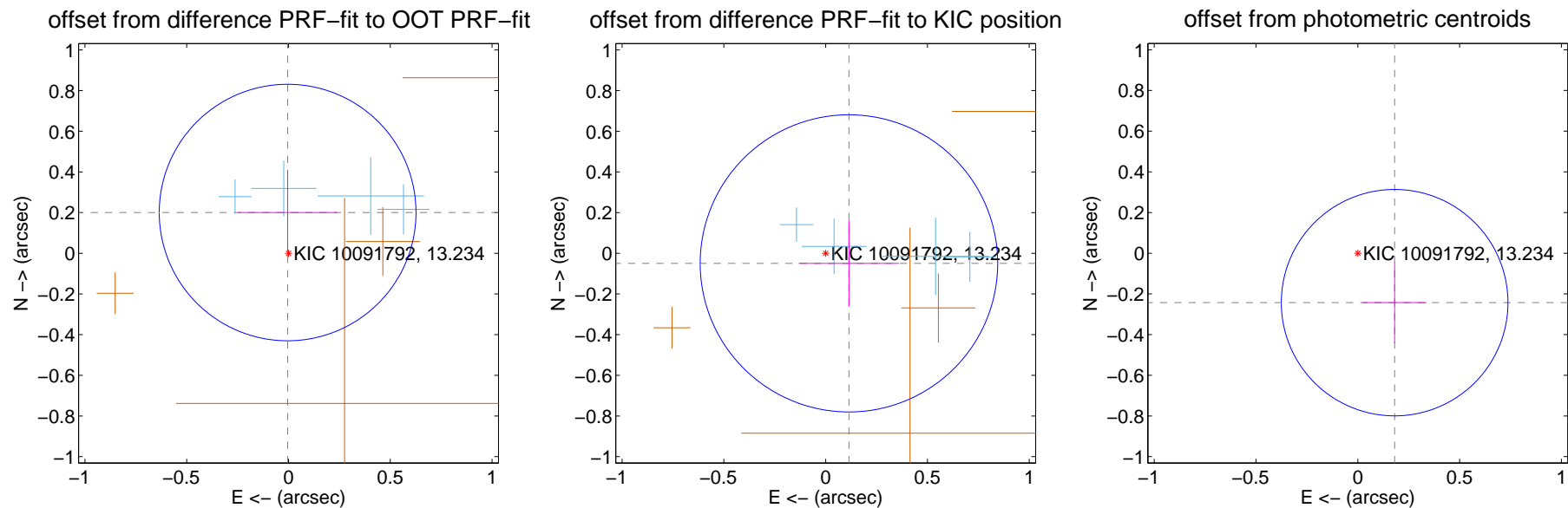
DV Centroid Data

Supplemental centroid analysis for 010091792-04. Kepler magnitude: 13.23. Transit SNR 6.95

There are 7 quarters with good PRF difference image offsets

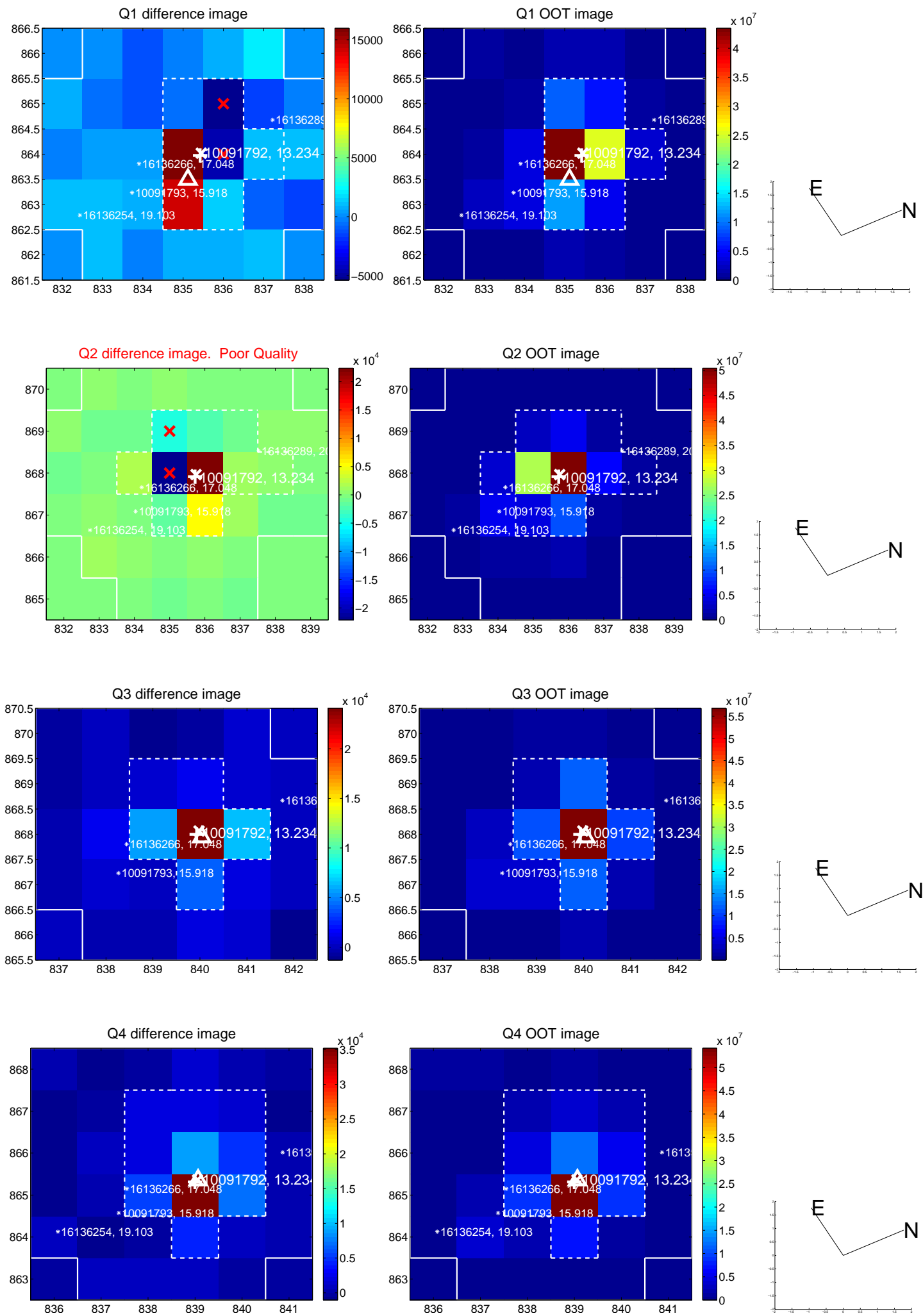
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.200 ± 0.210	0.95	0.004 ± 0.245	0.200 ± 0.210
PRF-fit source offset from KIC position	0.125 ± 0.244	0.51	-0.114 ± 0.246	-0.050 ± 0.211
photometric centroid source offset	0.30 ± 0.19	1.63	-0.18 ± 0.16	-0.24 ± 0.20

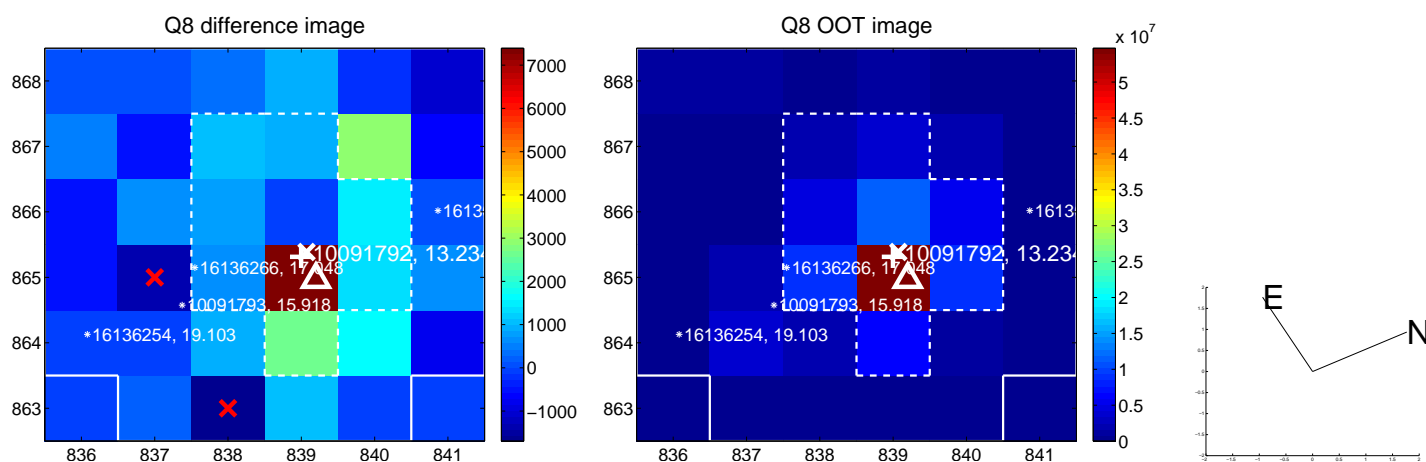
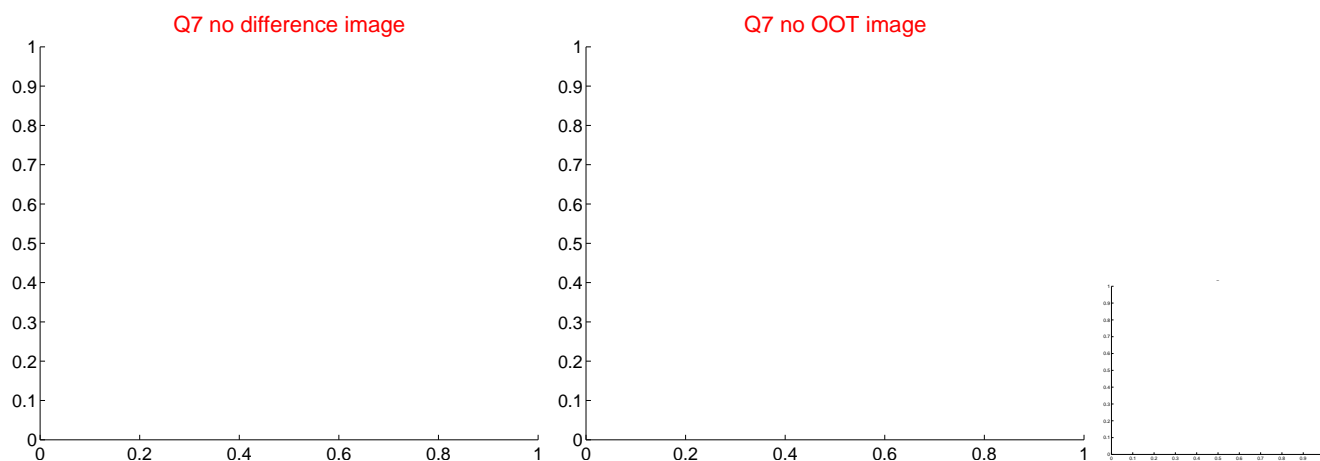
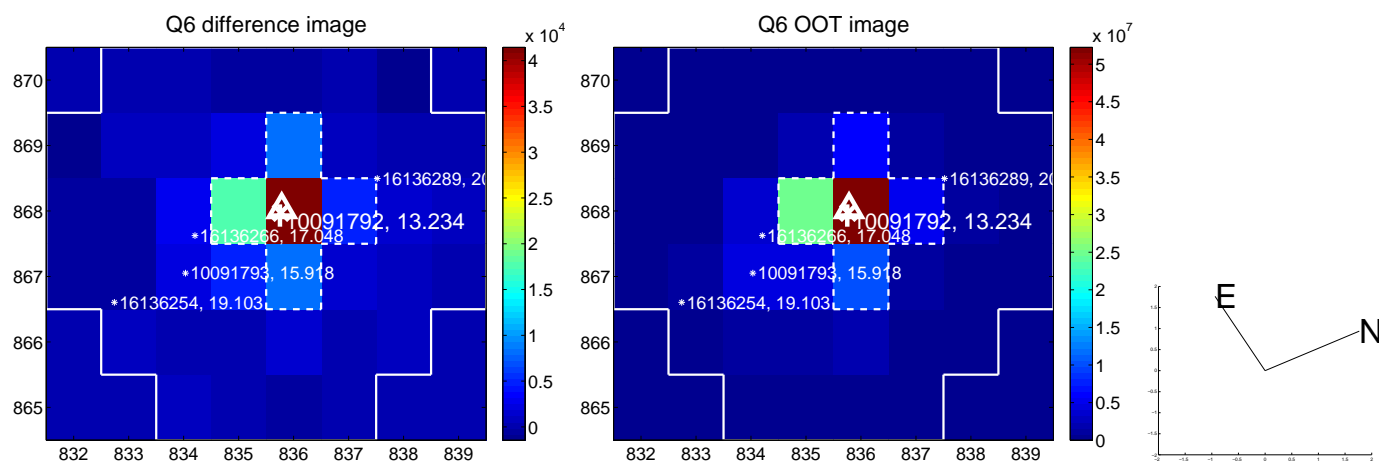
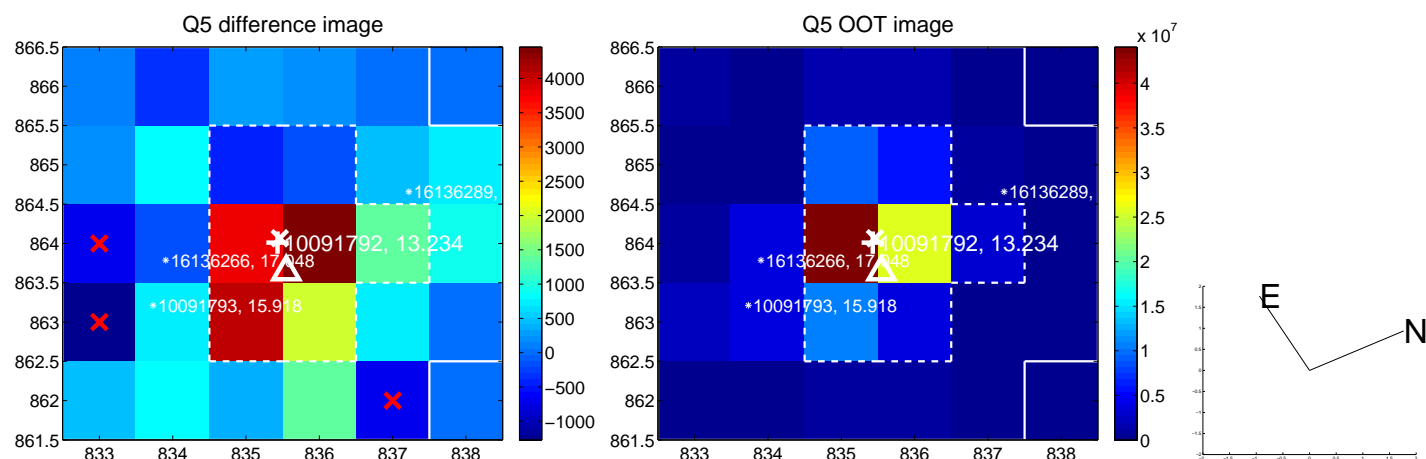


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

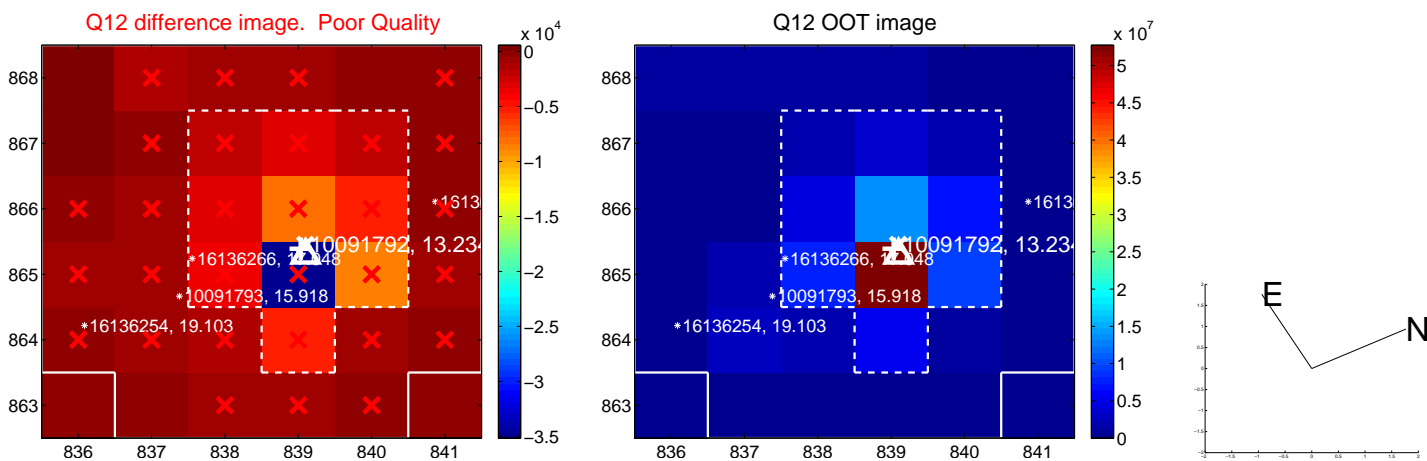
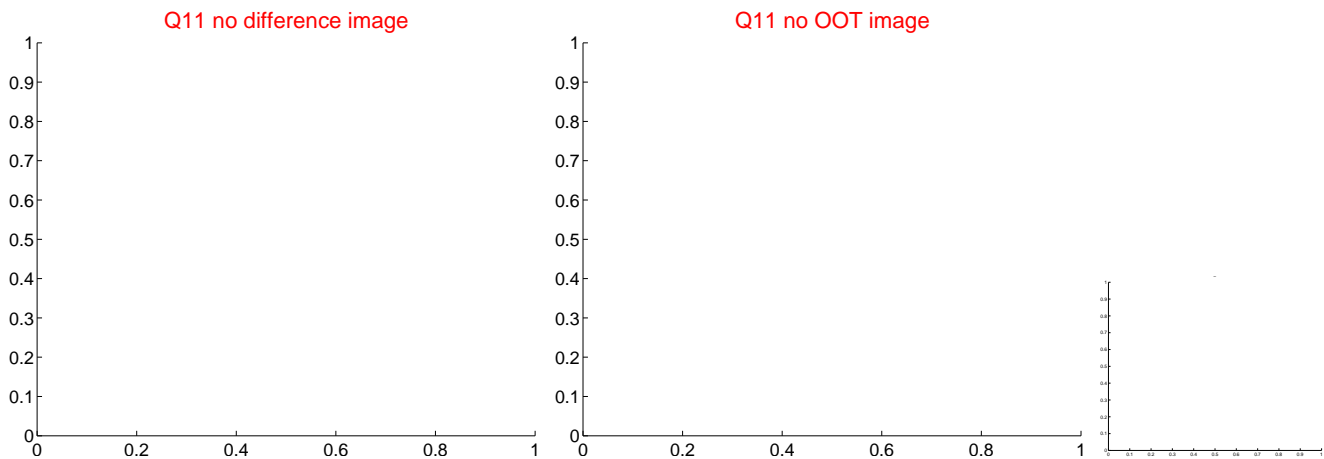
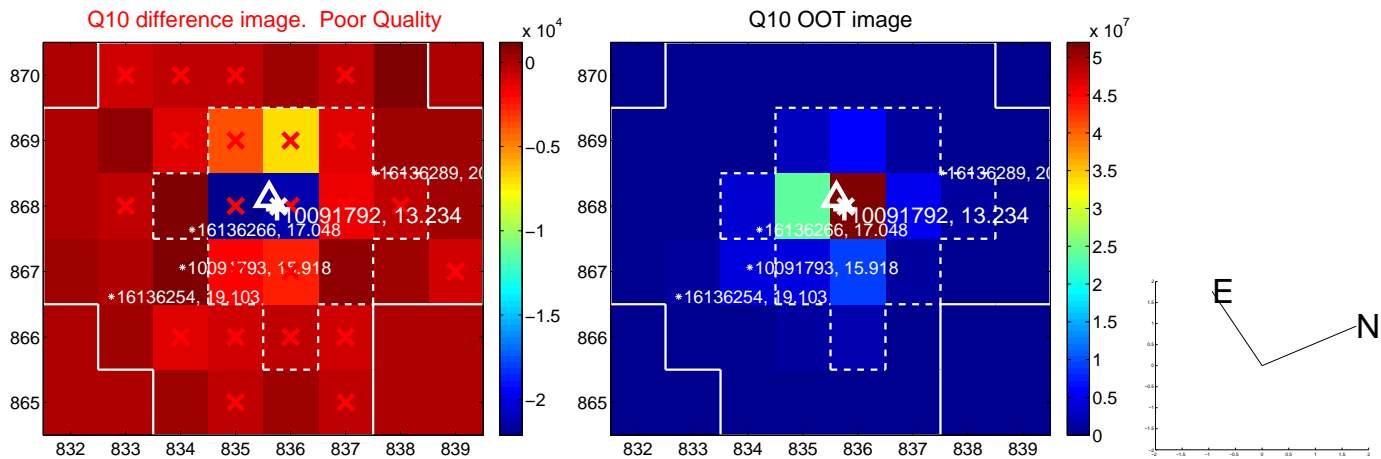
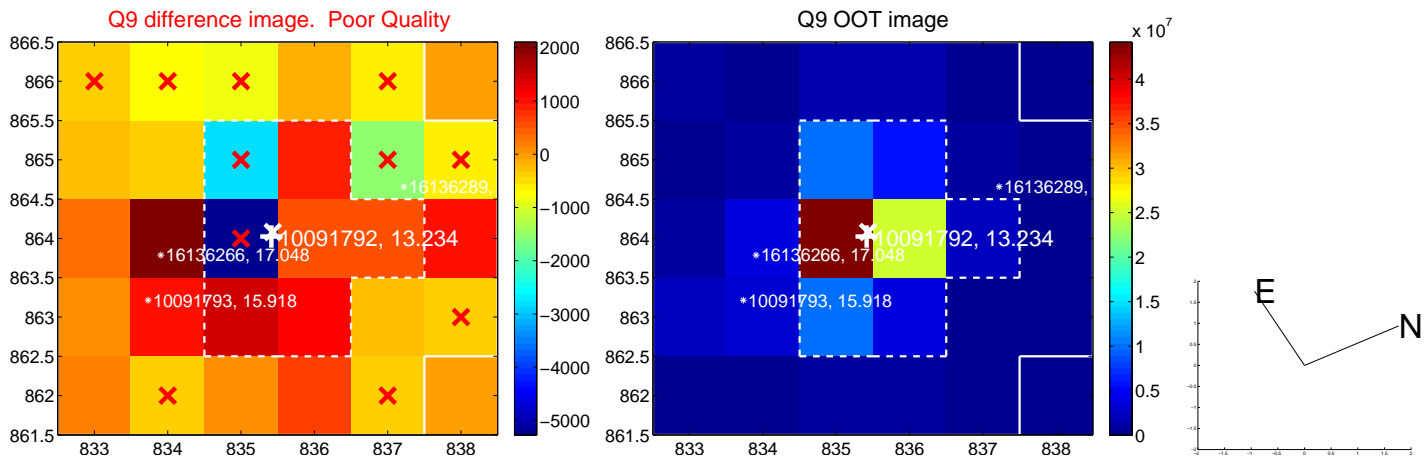
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



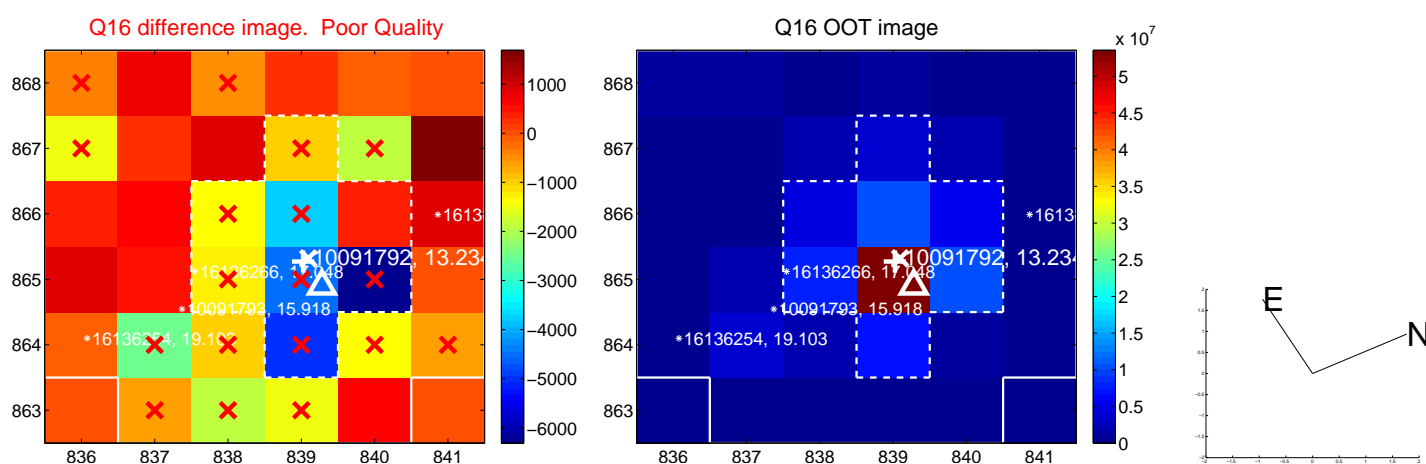
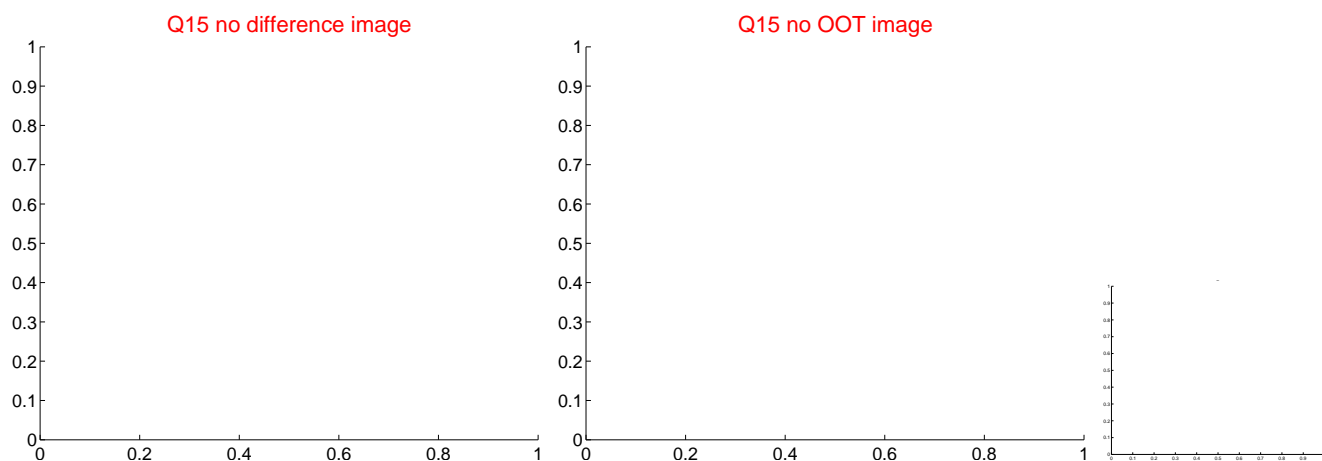
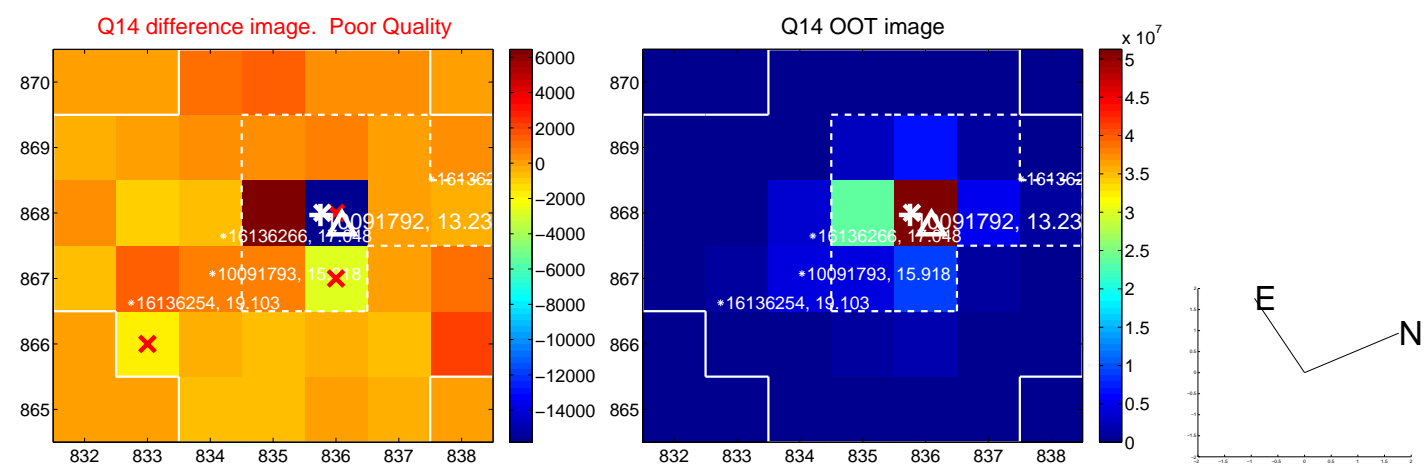
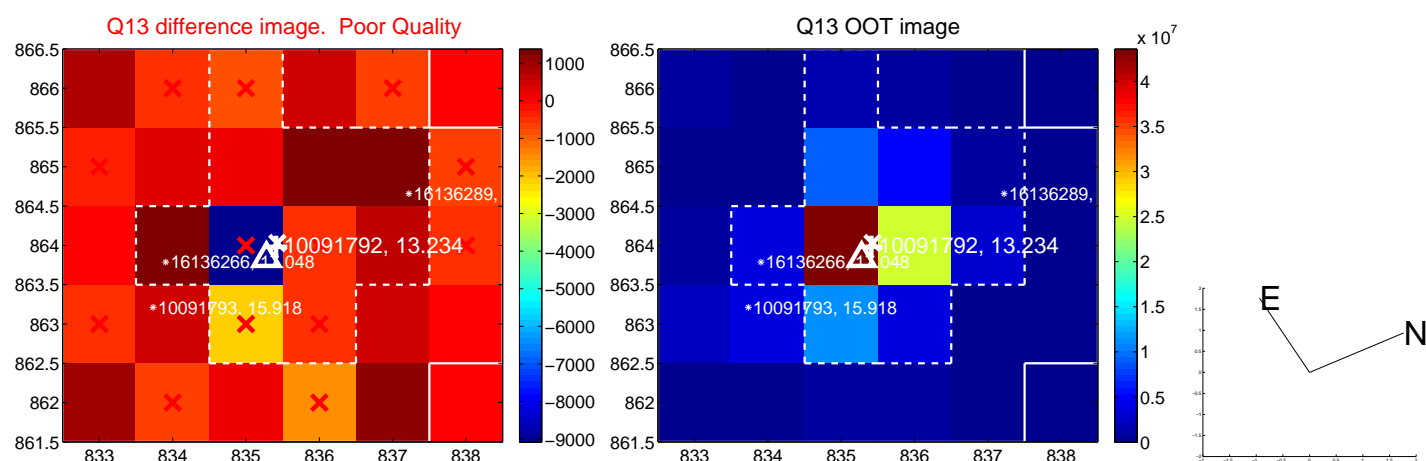
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



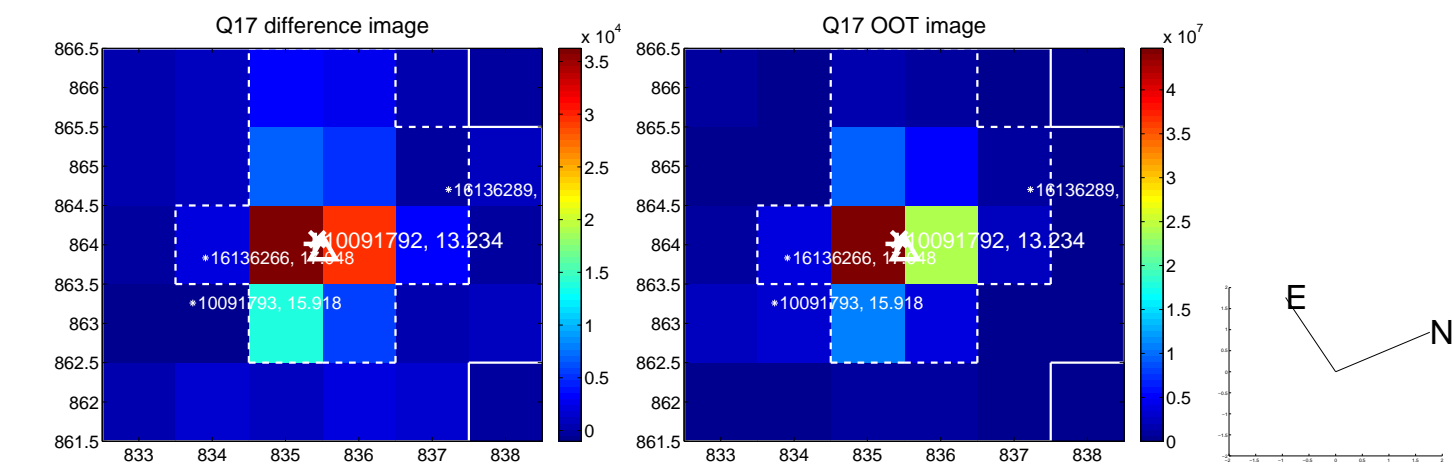
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



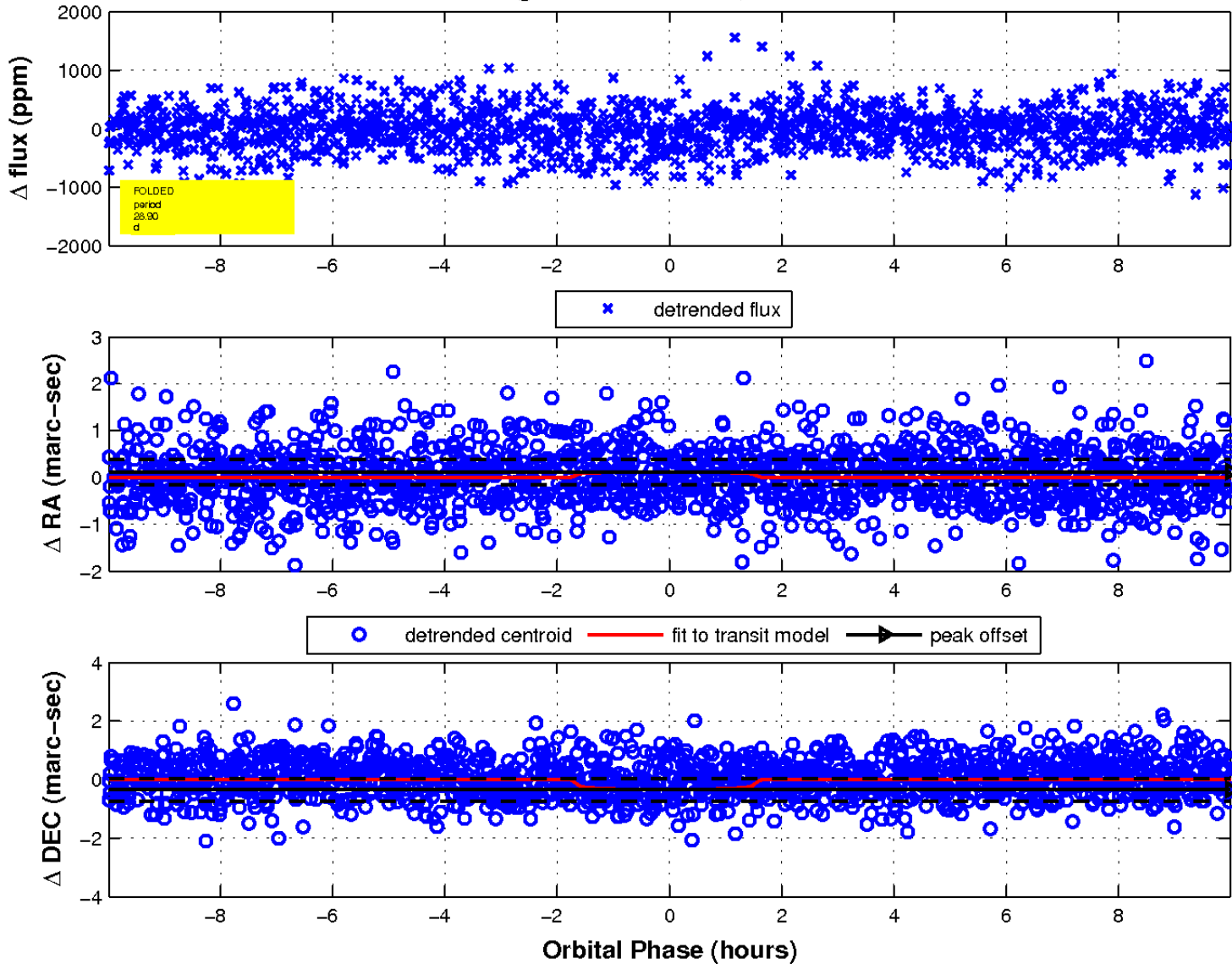
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 4 of 4



UKIRT Image

Declination

